

# Louisiana Department of Wildlife and Fisheries 2004-2005 Annual Report



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*The charge of the Louisiana Department of Wildlife and Fisheries is to protect, conserve and replenish the natural resources, wildlife and aquatic life of the state.*

**Kathleen Blanco, Governor**

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**Dwight Landreneau, Secretary**

**Division Administrators**

Bennie Fontenot, Inland Fisheries  
 Karen Foote, Marine Fisheries  
 Dave Moreland, Wildlife  
 Philip Bowman, Fur & Refuge  
 Col. Winton Vidrine, Enforcement

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# **OFFICE OF SECRETARY**

*The Office of Secretary is administered by the department's chief administrator officer, who oversees all scientific operations as organized by the Office of Wildlife and the Office of Fisheries. The Secretary also has ultimate authority over the operation of the department's fiscal and business matters as administered by the Office of Management and Finance. Support operations of the department report directly to the Secretary. These include the Enforcement Division and the Seafood Promotion and Marketing Board, as well as the department's Legal Section.*

## **ENFORCEMENT DIVISION**

The Enforcement Division is responsible for enforcing laws enacted by the Louisiana Legislature relative to fish and wildlife resources and boating safety regulations, as well as federal regulations pertaining to migratory birds and endangered species.

## **LOUISIANA SEAFOOD PROMOTION & MARKETING BOARD**

The Louisiana Seafood Promotion and Marketing Board was created by the Louisiana Legislature with the purpose of enhancing the public image of commercial fishery products, promoting the consumption of these products and assisting the seafood industry. According to the mission statement, the board assistance is to twofold: product promotion through advertising programs and public image enhancements; and market development by better utilizing existing markets and establishing new market opportunities.



# ENFORCEMENT

The Enforcement Division of the Louisiana Department of Wildlife and Fisheries provides a number of unique services to the citizens of our state. In addition to the traditional wildlife and fisheries law enforcement role, other programs include boating law enforcement, boat and hunting accident investigations, boat education and search and rescue responsibilities.

Current funding provides a field enforcement staff of two to four agents per parish, with positions allocated due to the amount and diversity of activities, participating population, workload and other factors. Total division head count is 261 positions, with an average of 10-20 vacancies at any given time due to retirement, resignation, etc. This number includes administrative staff, six communications officers and three pilots.

Agents utilize a large variety of equipment to accomplish these missions, including ATVs (4-wheelers), 4-wheel drive trucks and boats of all size and types. Primary patrol vessels are outboard bay boats and Boston Whalers in 19-to 27-foot lengths, but also used are go-devils, airboats, mudboats, bass boats, flatboats up to 20 feet long and a 65-foot crew boat, the *Rip Tide*.

Most day to day enforcement patrols are performed by region agents. Louisiana is divided into nine enforcement regions, each composed of two or three multi-parish districts. Regions have between 16-25 agents who are on call 24 hours per day. Regions are managed by a captain, who supervises two or three district supervisors of the lieutenant rank. Field agents work a schedule assigned by their supervisors and geared to address seasonal needs, complaints, weather conditions and predominant activities. Schedules are often changed due to weather and complaints, and agents are often called out to respond to in-progress complaints, boating and hunting accidents and calls for search and rescue.

Enforcement agents issued a total of 14, 714 criminal citations and 3,173 written warning citations this fiscal year, and had 722, 374 public contacts.

## SPECIALIZED UNITS

In addition to the regional enforcement programs, specialized units focus on certain activities or locations. These specialized units include the Oyster Strike Force, Saltwater Enforcement Patrol, Special Operations, Special Investigations, Statewide Strike Force and Aviation Sections.

The Oyster Strike Force works with region agents in coastal regions to address violations in the oyster industry, primarily harvesting from closed waters, stealing from oyster leases and state grounds and oyster size regulations.

The Saltwater Enforcement Patrol utilizes the 65-foot patrol vessel *Rip Tide* to enforce recreational and commercial fishing regulations in the Gulf of Mexico, Breton and Chandeleur Sounds and other large water bodies. The *Rip Tide* can also serve as a command post on the water for certain operations.

The Special Operations Section houses covert operations, in which undercover agents work to stem the illegal sale of fish and game,

develop information about ongoing criminal enterprises and address major violations of state and federal law.

The Special Investigations Unit devotes attention to commercial fisheries operations and license fraud. Violations include the under-reporting of commercial fish harvest, smuggling, false reporting and interstate commerce violations.

The Statewide Strike Force is a group of agents who are assigned to work problem areas, generally away from their home regions. These agents provide regions with additional manpower on wildlife management areas and places of high seasonal utilization, such as Grand Isle.

Enforcement missions are supported by the Aviation Section. Three pilots using three airplanes provide a platform for observation of illegal hunting and fishing activities, baited areas and other violations. They play a vital role in search and rescue operations, and have helped to save numerous lives. The Aviation Section also provides services to other divisions for biological missions, such as waterfowl counts, monitoring of commercial fisheries and research missions.

## BOATING SAFETY PROGRAM

With well over 320,000 registered boats and a large commercial fishing fleet, boating safety is an extremely important program. Louisiana also boasts several busy ports and a thriving shipping industry, which creates further boating safety challenges for boaters. In fiscal year 2004-2005, agents worked over 116,000 man-hours on boating enforcement, education and accident investigation. More than 77,000 hours were spent on patrols utilizing a vessel.

The enforcement of boating safety regulations and boating while intoxicated (BUI) laws has been enhanced with the passage of "Rules of the Road" for boaters. These provide the boating public with clear rules for the manner in which boats are operated, and are an important tool in determining fault in boating accidents. The "Rules of the Road" also enhance the ability of agents to address reckless and careless operation of motorboats.

Agents continue to provide search and rescue services, both on land and water. These operations save lives and reduce the suffering of accident victims, stranded hunters and boaters and anyone needing rapid response. Additionally, they also minimize the anxiety for family members unaware of the fate of their loved ones. Agents receive specialized training in search and rescue and work constantly to develop close working relationships with other agencies so that response efforts can be coordinated.

An increasingly important aspect of the boating safety program is boater education. Act 921 of the 2003 Regular Session required mandatory boater education for anyone born after January 1, 1988. Agents in each region hold classes each month, and are in the process of recruiting and training volunteer instructors. This program is similar to hunter education, and provides a vital outreach to the community. In the 2004-2005 fiscal year, 4,264 citizens attended 252 classes. The class is approved by the National Association of State Boating Law Administrators, and teaches safe, legal and responsible boat operation.

## TRAINING PROGRAM

The Wildlife and Fisheries Law Enforcement Academy graduated 14 agents in the 2004-2005 fiscal year. The academy trains and certifies cadets in a wide variety of areas, including the Peace Officers Standards and Training (POST) Council certification required of all law enforcement officers. Cadets live at the academy during the week and experience a boot camp style program, with daily physical training in addition to classroom activities. There are many hands-on courses, such as waterfowl enforcement, boat operation and firearms training. Each cadet is equipped with a laptop computer with the capability for networking through the Internet for access to web based courses and research sites.

Cadets receive training in numerous courses of study and are certified in 10 courses of training conducted by expert trainers from a number of other agencies, including in house trainers certified by the FBI. The certification courses are: standardized field sobriety training (LDWF); chemical testing for insobriety (Louisiana State Police); DWI detection (LSP Highway Safety Division); Louisiana Safe Driver's Course (Department of Public Safety); basic marine theft, basic defensive tactics, collapsible baton techniques, wildlife agents aquatic survival and chemical weapon indoctrination (LDWF).

## JOINT ENFORCEMENT AGREEMENT

The Enforcement Division again entered into a Joint Enforcement Agreement (JEA) with the National Oceanic and Atmospheric Administration's Office for Enforcement. Under this agreement, Enforcement Division received \$1.5 million to patrol for compliance with federal fisheries regulations, primarily in the Gulf of Mexico. Several patrol vessels and other necessary equipment have been

acquired under this program. Agents have been very successful, obtaining a number of large cases involving commercial and recreational violations.

## OPERATION GAMETHIEF

Louisiana Operation Game Thief, Inc. (OGT) is a program which provides cash rewards to those who report wildlife violations which result in arrests. A 24-hour telephone number (1-800-442-2511) is maintained in the LDWF Communications Center. Calls are immediately referred to agents for action. The caller may remain anonymous.

For the fiscal year, over 2,000 calls were handled. Rewards totaling \$18,600 were paid on 48 cases. The total amount of rewards paid by OGT since its inception 21 years ago is \$193,200.

## HOMELAND SECURITY

The Enforcement Division is a very active participant in Louisiana's Homeland Security Plan and represents the state in waterborne emergencies. Through the Office of Emergency Preparedness (OEP), the Enforcement Division is tasked with response in search and rescue operations during natural disasters and, most recently, maritime security of Louisiana's vital business and government interest along major rivers and the coast. As members of the Governor's Homeland Security Advisory Council, the Area Maritime Security Executive Steering Committee and all major port security committees within the state, our enforcement agents respond frequently to requests for our marine resources to be deployed for security concerns. Our ability to operate throughout the state's vast maze of waterways and wild areas with specialized training and equipment has complimented Louisiana's ability to respond to emergencies on the water and in rural areas.

# LOUISIANA SEAFOOD PROMOTION & MARKETING BOARD

The Louisiana Seafood Promotion and Marketing Board was created by the 1984 Louisiana Legislature to enhance the economic stability of the seafood industry while supporting wise management of the state's fishery resources.

During fiscal year 2004-05, the overall economic infrastructure of the seafood industry continued to reinvent itself to meet the demands of an emerging global marketplace. The Louisiana Seafood Promotion and Marketing Board (LSPMB) closely aligned itself with these opportunities.

## SPECIAL EVENTS

### Gulf Coast Seafood Pavilion

LSPMB partnered with the prestigious Louisiana Restaurant Association (LRA) and Southwest Cargo to develop, for the second year, a trade expo exclusively featuring domestic seafood.

Exhibit sites were created within the already enormously successful LRA Food Service Expo in New Orleans.

### Great American Seafood Cook Off - When It's Really Good, You Always Want Seconds!

LSPMB hosted the second annual contest of distinguished chefs

from coast to coast to raise awareness of the superior quality of American seafood. Bill Hogarth, director of NOAA Fisheries (sponsor of the event), crowned Executive Chef Randy Evans as the 2005 Great American Seafood King. Chef Randy hails from Brennan's of Houston.

### Acme World Oyster Eating Contest

Now in its fifth year, the famous oyster eating contest draws sports eaters from across the country. Sweet Sonya Thomas, the 2005 champ, consumed 46 dozen ice-cold raw Louisiana oysters, breaking her 2004 record with ease.

She then broke the Acme house record of 51 dozen in one sitting by eating another six dozen. The New Orleans event has hoisted Louisiana oysters to historical levels of visibility.

### Oyster Education Day

LSPMB and the Louisiana Oyster Task Force hosted a briefing on the Louisiana oyster industry and a step by step tour from oyster lugger to restaurant table on how oystering works. The guests of honor were members of the senate and house Natural Resource Committees. LDWF marine fisheries biologists provided interpretive comments on the history and status of Louisiana's oyster fishery.

## **On the Hill**

The Louisiana Seafood Promotion and Marketing Board, the Louisiana Oyster Task Force and the Gulf Oyster Industry Council trekked to Washington, D.C. to participate in the annual showcase of Louisiana agricultural products.

## **ADVERTISING CAMPAIGNS**

### **Bonne Crevette**

LSPMB launched a major shrimp advertising campaign - powered by the French phrase meaning "good shrimp." It includes billboards, radio and print, and it kicked off both shrimp seasons.

A win-win component added restaurants to the mix. The board advertised restaurants who pledged to serve Louisiana shrimp. Restaurants get better sales; diners get better shrimp. Over 80 restaurants joined the campaign.

Advertising campaigns during 2004-05 delivered 66.5 million impressions:

- *City Business Magazine*
- Culinary Concierge
- *Gambit Newspaper*
- Lamar Billboards
- *Louisiana Cookin' Magazine*
- *Louisiana Life Magazine*
- Louisiana Network Radio, statewide
- *New Orleans Gourmet Magazine*
- *New Orleans Magazine*
- *Seafax Magazine*
- *Seafood Business Magazine*
- WWL am Radio.
- WWL-TV

## **QUALITY ASSURANCE**

### **Taking Gulf Shrimp to the Next Level**

Research shows that consumers will pay more for a local product, particularly if they are getting exceptional quality.

Presently, fisheries concerns around the country are setting up various quality control programs. Domestic seafood businesses know that it's critical to set their product apart to distinguish it from imports.

With the support of LSPMB, Dr. John Bell of LSU's Food Science Program is working with Wild American Shrimp Inc. (WASI) to create that opportunity for Gulf of Mexico shrimp.

They're creating a Shrimp Certification Program that will stamp Louisiana shrimp as meeting scientific criteria for excellence.

## **COMMUNICATIONS**

### **Cooking Today**

LSPMB partnered with WDSU-TV 6 New Orleans for what would be a third very successful season of "Cooking Today." The cooking

segment airs every Saturday morning on the *Today Show*. Local chefs showcase terrific Louisiana seafood dishes.

### **www.LouisianaSeafood.com**

LSPMB's web site won an Addy Award for creative excellence. Trellis Smith, creative and managing director of EC Advertising, accepted the honor from The Advertising Club of New Orleans. EC is a small company that works with the board and developed the site.

### **Louisiana Cyber Fish**

The LSPMB launched Louisiana Cyber Fish, an electronic seafood industry newsletter. It reports on seafood commerce, promotion partnerships and Louisiana marketing successes.

The e-newsletter is distributed to fishermen, processors, fisheries scientists, media and other interested persons. Distribution is up to 3,000.

### **Editorial Features**

LSPMB staff produced news features and radio announcements providing information and educational tips about Louisiana seafood. These were distributed by North American Precip Syndicate, Inc. (NAPS) across the country to a readership and listenership of 114.5 million.

NAPS awarded Sara Ann Harris, LSPMB public information officer, a Certificate of Excellence for *A Holiday Hint from Chef Paul Prudhomme*. The story was published by 680 newspapers, placing it in the top quarter of 1 percent in distribution for all NAPS 2005 stories.

## **TRADE SHOWS**

- International Boston Seafood Show
- International Hotel-Restaurant Show, New York
- Louisiana Restaurant Association, New Orleans
- National Restaurant Association, Chicago

## **EDUCATION PROGRAM**

The board's education program aligned with WLPB-TV Educational Services to make their documentary and study units available free to every school in the state. Schools subscribe to United Video Streaming, the largest and most current digital video library available.

The documentary, *Living on the Edge*, was viewed by over one thousand classes, or approximately 28,852 students.

The board's interpretive installations continue to be enjoyed by thousands at the Audubon Zoological Gardens, the Terrebonne Water Life Museum in Houma and the Marine Fisheries Museum in Lafitte.

# **OFFICE OF MANAGEMENT & FINANCE**

*The Office of Management and Finance is directed by the Undersecretary. This budget unit is responsible for the functions of accounting, budget forecasting and control, procurement and contract management, administrative services, information technology and services, management and program analysis (including strategic and operational planning), socioeconomic research and analysis, property control (including fleet management), boat registration, customer service program management, human resources management (including payroll), grants management, administration and issuing of licenses and permits, collection of fees, taxes, fines and penalties, public information and the Louisiana Conservationist magazine.*

## **PUBLIC INFORMATION**

The Public Information Section manages the internal and external communications activities for the Department of Wildlife and Fisheries.

## **LICENSING**

The Licensing Section controls the issuance of all licenses and collection fees.

## **COMPUTER CENTER**

The Computer Center oversees the department's information processing resources.

## **SOCIOECONOMIC RESEARCH & DEVELOPMENT**

This section conducts and presents research regarding economic factors and customer service issues.

## **ADMINISTRATIVE SERVICES**

The Administrative Services Section assists with agency term contracts specific to Wildlife and Fisheries seafood promotions, alligator harvest, timber sales and farm leases.

## **HUMAN RESOURCES**

The Personnel Section administers all aspects of an extensive human resources program for the department

## **PROPERTY CONTROL**

The Property Control Section has program responsibility for the Property Control Program, Fleet Management Program and Risk Management Program.

## **FISCAL**

The Fiscal Section is responsible for all financial operations of the department.

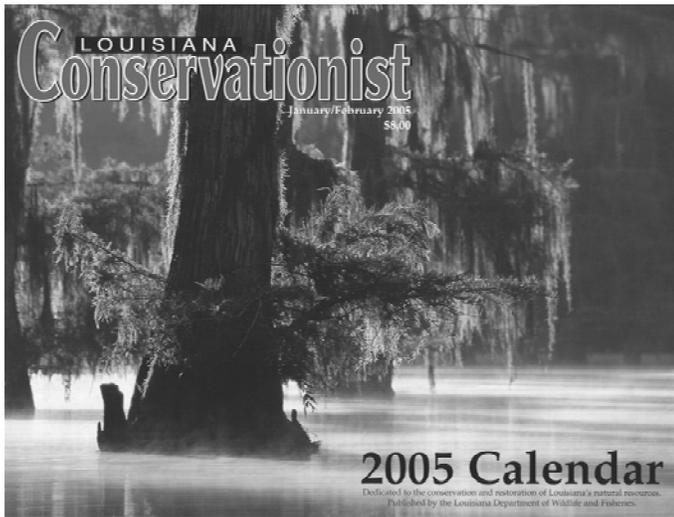


# PUBLIC INFORMATION

The Public Information Section is responsible for the production and distribution of the department's printed materials, ongoing media relations, public resource centers, audio-video productions and special promotions or events for the Louisiana Department of Wildlife and Fisheries (LDWF). The section consists of eight employees who accomplish these tasks through six programs: *Louisiana Conservationist* magazine, Publications, News and Media Relations, Audio-Video Productions, Public Resource Library, and Special Events.

## LOUISIANA CONSERVATIONIST MAGAZINE

*Louisiana Conservationist* magazine (LCM) is the most widely known of the section's programs. It is LDWF's flagship publication and has an excellent reputation as a high quality, informative educational tool. It is the state's oldest outdoor magazine with its first publication in 1923 as a small black and white newsletter. Today it is a 36-page, full-color magazine that has remained in continuous publication since its beginnings. LCM maintained its regular publishing schedule of six issues per year including the calendar, with a controlled circulation of approximately 19,000.

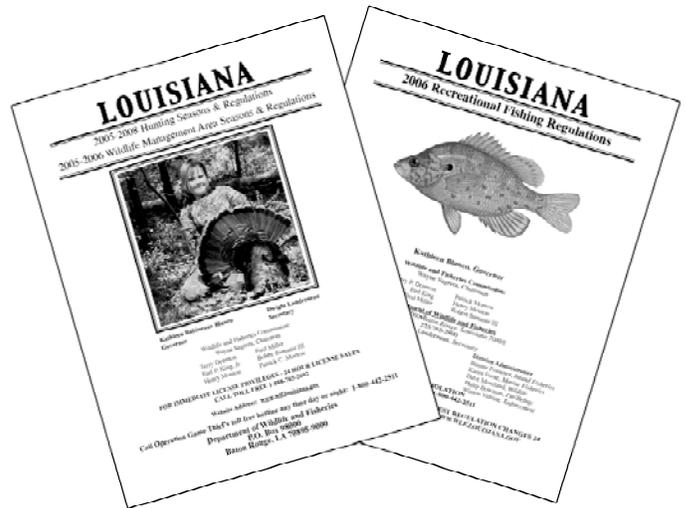


designed and published a 16-page four-color recruitment brochure for the Human Resources Section and designed the new *Louisiana Forest Stewardship Newsletter* slated for distribution the following fiscal year.

The publications unit is responsible for producing and distributing all fishing, hunting and trapping regulation pamphlets. The publications unit handles all pre-press work, printing approvals and final distribution arrangements. Requests from the public for regulation pamphlets are fulfilled through the LDWF Library.

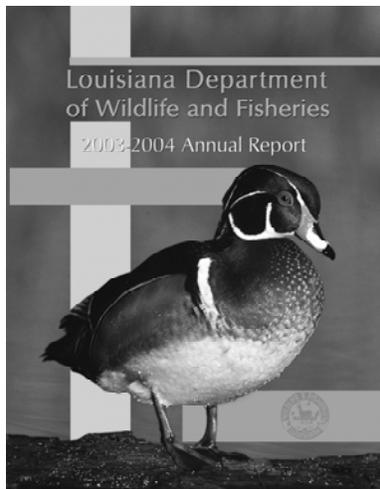
The following regulation pamphlets were distributed during last fiscal year:

- *Louisiana Recreational Fishing Regulations 2005* (300,000)
- *2005 Commercial Fishing Regulations* (20,000)
- *Louisiana Hunting Seasons and Wildlife Management Area Regulations 2004-2005* (300,000)
- *Louisiana Migratory Game Bird Hunting Regulations 2004-2005* (220,000)
- *Louisiana Trapping Regulations 2004-2005* (10,000)
- *Louisiana Turkey Hunting Regulations 2005* (80,000)



## PUBLICATIONS

During this fiscal year the Public Information section created a new unit with the specific purpose of developing and producing LDWF publications. Although the primary publication type for this unit was regulations, it also included the annual report, several specialized brochures and various manuals and books. The 2003-2004 annual report was produced and for the first time distributed in an electronic format. This unit also



## NEWS AND MEDIA RELATIONS

During fiscal year 2004-2005, the LDWF news service provided 402 news releases and features to approximately 200 media outlets through an electronic weekly mailing. The department's biweekly newsletter progressed to an electronic format this year for better access to all interested parties.

Statewide public meetings for the 2004-2005 hunting seasons were held in Spring 2005. The news and media relations staff, and the Wildlife Division coordinated the meetings in seven locations statewide.

The media relations unit coordinated and facilitated media contacts for department personnel in conjunction with the LDWF press secretary. These duties included press conferences, interviews, special appearances, editorial responses and specialize

information campaigns. During 2004-2005, this unit received an average of five media inquiries per week, requesting general department information, photographs and digital images. Four media events with statewide television and print coverage were initiated by media relations staff members. These events consisted of interviews, distributing video news releases (VNR) and talk show appearances.

### AUDIO-VIDEO PRODUCTIONS

The Louisiana Department of Wildlife and Fisheries audio-video unit is unique because few state agencies have the capabilities of producing video productions. Although this unit is capable of creating audio productions, it focuses primarily on video.

Video news releases (VNR), specialized audio or video requests, and recording of meetings and events are the responsibility of this unit. Four VNRs were created this year and distributed statewide to 15 major television stations; a 10-minute DVD outlining LDWF was created for general public information; three Public Information quarterly reports in video format were presented to the Louisiana Wildlife and Fisheries Commission; and the annual enforcement commencement video chronicling the 26-week cadet training process was created. The A/V unit is also responsible for officially recording audio for the monthly Wildlife and Fisheries Commission meetings. Several days of field footage were also taken documenting LDWF's public events, management programs and operations, for future use with videos and media requests.

### PUBLIC INFORMATION AND RESOURCE LIBRARY

The Information and Resource Library is open for public access during normal work hours. Available materials include various natural resource related publications, *Louisiana Conservationist*, wildlife management area maps, historic books and documents, regulation pamphlets and a selection of VHS videos available for loan. The library also houses the department's small marketing unit that retails items generated within LDWF. These items include maps, books, posters, manuals and various other documents created by its employees.

The library receives public information request on a daily basis. The total number of information requests received for fiscal year

2004-2005 was 5,020. The breakdown by source was as follows:

- E-mail 546
- U.S. Mail 147
- Phone 500
- Walk-in 3,826

Another element of the library is the main reception area located at the headquarters building in Baton Rouge. This front line contact is operated and maintained by library staff members, greeting and directing visitors as they enter the building. All inquiries, phone calls and walk-in visitors are cataloged by month. The total number of inquiries for 2004-2005 were 6,619 walk-ins and 11,316 phone calls.

### SPECIAL PROMOTIONS/ACTIVITIES

The Public Information Section is responsible for organizing and executing special public and promotional events for the department. These events are the responsibility of all six units with each unit contributing their expertise.

A new event this year took place as a joint venture between LDWF and Ducks Unlimited, called Green Wing Day. This event offered a full day of outdoor activities at the Waddill Outdoor Education Center in Baton Rouge. Educational exhibits, sport shooting, boating and other outdoor activities were offered to the public free of charge.

For a second year Public Information represented LDWF at the annual Louisiana Restaurant Association's trade show in New Orleans. A floor exhibit was created and manned in the Gulf Coast Seafood Pavilion. The Public Information staff also assisted the Louisiana Seafood Promotion and Marketing Board with on-site help at the Great American Seafood Cook Off.

Louisiana's National Hunting and Fishing Day Celebration took place again at four locations across the state. The Public Information Section is responsible for organizing and executing the Baton Rouge celebration. This annual event offers a full day of outdoor activities for the public, free of charge. This was the 20th year for Baton Rouge and attracted approximately 2,200 attendees.

## LICENSING

To better serve in excess of 1 million customers, the licensing division continues to streamline processes to improve availability and reduce processing time for licenses and boat registrations. Commercial licenses are available to our customers at the Bourg Office during December and April, boat renewals are available by Internet and telephone and recreational licenses are available at more than 700 locations throughout the state, as well as by Internet and telephone.

License/registration activities and related revenue collections are as follows:

- 1.74 million recreational hunting and fishing licenses

generated \$21 million in revenue, in excess of 800,000 customers

- 72,669 commercial licenses sold, generating \$3.69 million in revenue, in excess of 20,000 customers
- 142,969 boat registration activities, generating \$3.3 million in revenue, maintaining data for boats in excess of one million records, 322,805 of which are active registered

Licensing staff attended the Annual Conservation Business Managers Association and Southeastern Association of Fish and Wildlife Agencies conferences.

# COMPUTER CENTER

The Louisiana Department of Wildlife and Fisheries' Computer Center is responsible for maintaining the agency's information processing resources. The center operates three mainframes and 15 Intel-based "Windows" servers. Five hundred thirty-three computers in 15 locations throughout the state are supported by the Computer Center which also supports and maintains the network infrastructure that ties them all together. We offer training, help desk support, custom programming, database services, E-mail services, Internet access, user data backup for headquarter users, statistical analysis tools for biologist and imaging services for Human Resources, Licensing and Fisheries.

Additionally the Computer Center has developed the mainframe applications necessary to sell and maintain commercial licenses, motorboat registrations, hunting and boating safety, alligator system and lottery system. On the Intel platform, we developed and maintain the Enforcement application that allows us to track citations as well as the magazine system that tracks the *Louisiana Conservationist* magazine subscription information.

The Computer Center along with the Public Information section maintains the department's public Web server which contains information on hunting rules and regulations, season dates, licensing information, emergency closures and much more.

## TECHNICAL SUPPORT SECTION

The Technical Section, which consists of four employees, supports 533 PCs throughout the state. In the last eight years the number of personal computers that the department utilizes has grown from fewer than 25 to more than 500. Keeping these machines maintained and secure is one of the technical section's biggest challenges. Each of these machines must have regular updates applied and have certain software installed and updated, such as anti-virus and spyware protection. Providing general help desk support for these PCs will occupy a large portion of a tech's time. For the year 2005, the technical section fielded 1,959 non trivial telephone support calls, configured, built or relocated 255 PCs/printers and answered 1,987 emails on hardware and software support issues. Technical calls can be as simple as helping with an expired password, to helping with software problems or re-installations, to helping repair and diagnose failed hardware. The technical staff must travel regularly to all of our remote facilities to perform this maintenance on all machines.

The Technical Section maintains three mainframe and 15 Windows bases servers. Each of our mainframes/servers must be given daily maintenance. This includes not only keeping the operating systems and utility software up to date, but also providing regular backups for all critical data. Loss of data can come from simply losing a disk drive, losing entire computers or being hacked. Catastrophic loss of data can come from fire, flood, terrorism or other causes that would impact the entire organization. Additionally data can be lost through human reasons such as a user inadvertently deleting records that they shouldn't. All these risks must be mitigated. Primarily this is done through daily backups of all pertinent data. Every day all critical data on our servers is backed up and stored off-site. Additionally we also attempt to

back up the majority of our users' important data that they store on their hard drives.

Maintenance also includes keeping all the critical software that runs on the servers up to date and functional. The services we provide include things such as E-mail, databases, anti-virus protection, Web services, network operating system services/security. All these software packages are regularly updated. Training to keep up with these updates could easily be a constant activity.

Finally, the Technical Section is responsible for maintaining the underlying network infrastructure that allows all the computers to communicate with one another. This involves monitoring the network for problems and diagnosing and repairing network routers, switches, hubs, VPN concentrators and telephone data circuits (local and for all remote facilities). Included with this is guarding the network from internal and external threats (hackers/viruses) and maintaining Internet connectivity for all internal users.

## APPLICATION DEVELOPMENT SECTION

The Application Development Team, which consists of six employees, is responsible for maintaining all custom written applications and new application development. Our applications run on a combination of mainframe and Windows server environments. Current applications that we have developed and support include:

- Web based Enforcement system for issuing and tracking violations.
- Enforcement complaint system.
- Enforcement time sheet system.
- Enforcement revocations system.
- Enforcement seafood inspection system.
- motorboat application for issuing motorboat permits.
- commercial license application, for issuing commercial fishing licenses for the agency.
- magazine system for tracking the in-house *LCM*.
- training application for keeping track of mandatory and supervisory training.
- alligator system for tracking all alligators processed commercially in Louisiana.
- DPS system for looking up DMV records for residency validation.
- Lottery Hunt application to chose participants in the randomly drawn hunts.
- ZIP code lookup application.
- Hunter Education system for keeping track of participants in the mandatory hunter education program. A recent new addition to this application implemented this month includes giving the public the ability to request online a duplicate of their hunting safety card and receive online fulfillment. This is at no cost to the individual or the department.
- system to track permits that department personnel is involved with.
- revocation system for keeping track of individuals that we may not sell licenses to.

- Sports License (lifetime license printing).
- Web-based displaced boat lookup (to help public locate lost boats).
- Web-based DMAP, system for keeping track of Deer Management applications.
- Web-based Oyster Tag sales system.
- Trip Ticket employee performance system.
- legal application for tracking legal rulings and information.
- Nuisance Animal Control issued permits for nuisance animals.
- employee portal (application used by employees to launch other LDWF developed web based applications).

### IMAGING SECTION

The Imaging Section, which consists of four employees, is tasked with scanning and indexing a vast number of images from various sources. These include:

- federally mandated trip ticket data (from commercial dealers used in tracking commercial harvest information).
- DMAP invoices which provide wildlife division information on deer management areas.
- boating safety applications (new and backlog).
- hunter safety applications (new and backlog).
- bow hunter student applications.
- Enforcement complaint forms.
- Enforcement time sheets.
- Enforcement seafood inspection forms.
- Enforcement vessel inspection forms.
- LADT invoices (similar to DMAP).
- Motorboat revenue checks.
- other revenue checks.
- Shrimp Excise Tax forms (helps the Accounting division keep track of excise tax monies).

The Imaging Section takes request from Louisiana seafood dealers, in person, on the phone, by mail and by FAX. These orders can be very time consuming as they often need to explain the variety of forms and their usage. The hurricane season this past year damaged/destroyed many seafood dealer locations. The imaging section sent out approximately 1,300 form supply packages each month to dealers in need.

The Imaging Section not only scans a vast number of documents for the agency, but also verifies and corrects the data as well. This is very tedious work due to the wide ranges of handwriting and poor conditions of the forms when they arrive. In addition to their scanning duties, the Imaging Section runs nightly reports for the agency's applications systems and helps compile and print newsletters/news-releases for the Enforcement, Commercial License, Hunter Safety, Motorboat and Recreational License sections.

Additionally the imaging system that we maintain is used by the Motorboat section to image and archive all motorboat applications/renewals. Human Resources also images every employee document into the system. The imaging system cuts back drastically on the amount of paper documents that must be maintained, makes it possible for instantaneous search/retrieval of these documents and allows multiple HR analysts to be able to access the same records concurrently and securely.

### WEBSITE

The Department of Wildlife and Fisheries is in the process of developing a new Web site. This new Web site is intended to be more user friendly, dynamic and easy to navigate. This will be achieved with a new organizational structure designed with the public citizens' interests in mind.

How it will help:

- Easy to navigate.
- Information will be easy to locate.
- Visually appealing.
- Dynamic.
- Interactive.

Examples of the improvements we're making:

- Section 508 Accessibility compliance.
- Easy to find information on seasons, licenses and regulations.
- LDWF Newsletter subscription.
- Calendar of Events in monthly format.
- Frequently Asked Questions.
- Ability to easily conduct Web surveys.
- Public Services section.

## SOCIOECONOMIC RESEARCH AND DEVELOPMENT

The Socioeconomic Research and Development Section was established in 1992 within the Office of Management and Finance of the Louisiana Department of Wildlife and Fisheries. The duties and responsibilities of the section are:

- to recommend, conduct and coordinate economic research studies pertaining to wildlife and fisheries resources of Louisiana and the Gulf region.
- to present research findings at appropriate professional and scientific meetings and publish results in departmental publications and peer-reviewed scientific journals.
- to provide information and support to other sections and divisions within the department, as well as agencies outside the department, to assist them in accomplishing their research needs, management tasks and short or long-term objectives.

- to represent the department and state in various study groups, on task forces and on committees established to study, manage and improve wildlife and fisheries resources at the local, state, regional and national levels.
- to administer and implement special programs.
- to perform other activities as directed by LDWF's appointed authorities.

### PUBLICATIONS AND REPORTS

Chi, Yeong Nain, Jack Coburn Isaacs, Jorge L. Icabcaceta, Herb A. Holloway and David R. Lavergne. 2004. *An Analysis of Participation in Bird Watching in the United States*. Proceedings of the 4th Social Aspects and Recreation Research Symposium (Linking People to the Outdoors: Connections for Healthy Lands, People and Community), pp. 56-62, San Francisco, California.

Chi, Yeong Nain, Jack Coburn Isaacs, Jorge L. Icabalceta, Herb A. Holloway and David R. Lavergne. 2005. *Determinants of Participation and Expenditures: The Case of U.S. Recreational Saltwater Fishing*. Proceedings of International Academy of Business and Public Administration Disciplines Conference, #149: 1-7, New Orleans, Louisiana.

Isaacs, Jack Coburn and Yeong Nain Chi. 2005. *Audubon Country BirdFest 2004 Birdwatchers Survey: An Expenditure Analysis of a Birding Festival in Saint Francisville, West Feliciana Parish, Louisiana*. Socioeconomic Research and Development Section, Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana.

*An Analysis of the Artificial Reef Development Fund: including History, Donations, Investment Earnings and Expenditures*. Socioeconomic Research and Development Section, Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana. January 2005.

### PRESENTATIONS

Chi, Yeong Nain, Jack Coburn Isaacs, Jorge L. Icabalceta, Herb A. Holloway and David R. Lavergne. 2004. "Understanding Louisiana Anglers' Support or Opposition to Recreational Fishing Regulations and Programs." Paper presented at the 134th Annual Meeting of the American Fisheries Society (Human Dimensions of Fisheries), Madison, Wisconsin. August 22-26, 2004.

Chi, Yeong Nain, Jack Coburn Isaacs, Jorge L. Icabalceta, Herb A. Holloway and David R. Lavergne. 2005. "Determinants of Participation and Expenditures: The Case of U.S. Recreational Saltwater Fishing." Paper presented at the 2005 Winter Conference of International Academy of Business and Public Administration Disciplines, New Orleans, Louisiana, January 6-9, 2005. (This paper won a research award based on competition among papers at the IABPAD Conference.)

Chi, Yeong Nain, Jack Coburn Isaacs and David R. Lavergne. 2005. "Understanding Environmental and Fishing-Related Concerns of Red River Anglers in Louisiana." Paper presented at the 11th International Interdisciplinary Conference on the Environment, Orlando, Florida, June 23-25, 2005.

Dedah, Cheikhna, Jack C. Isaacs, Walter Keithly, and Richard Kazmierczak. "Estimating the Supply Curve for Nutria in Louisiana." Annual Meeting of the Wildlife Society, Calgary, Alberta, Canada, September 18-22, 2004.

Holloway, Herb. "Long-term relationship or one-year fling? Recruitment and retention of recreational anglers." Paper presented at the 134th Annual Meeting of the American Fisheries Society, Madison, Wisconsin. August 22-26, 2004.

Icabalceta, Jorge L. "Louisiana Mariculture Development Challenges." Paper presented at the 26th Annual Meeting of the Louisiana Chapter of the American Fisheries Society, Baton Rouge, Louisiana. February 3-4, 2005.

Isaacs, Jack C. "... And the Survey Says: How to Effectively Use Data Garnered in Customer Service and Reader Surveys." Workshop given at the Association for Conservation Information meeting, New Orleans, Louisiana, July 11-15, 2004.

Isaacs, Jack C., Cheikhna Dedah, Walter Keithly, Jr. and Richard F. Kazmierczak. "The Supply of Nutria and the Effects of Harvests on Coastal Marsh Conservation." Seminar presented to the Wetlands Research Center, University of Louisiana at Lafayette, Lafayette, Louisiana, November 4, 2004.

Isaacs, Jack C. and Yeong Nain Chi. "Preliminary Findings of the Saint Francisville BirdFest Survey." Presentation made at the Feliciana Nature Society, Saint Francisville, Louisiana, November 9, 2004.

Isaacs, Jack Coburn and Yeong Nain Chi. 2005. "The Economic Impact of St. Francisville's Audubon Birdfest." Preliminary research report presented at the 2005 Winter Meeting of the Bird Louisiana Group, Baton Rouge, Louisiana, January 11, 2005.

Isaacs, Jack C., Cheikhna Dedah, Walter Keithly, Jr. and Richard F. Kazmierczak. "Estimating the Supply Curve for Nutria Pelts from Coastal Louisiana and the Impacts Associated with Declining Prices." Paper presented at the annual meeting of the Southern Agricultural Economics Association, Little Rock, Arkansas, February 5-9, 2005.

Isaacs, Jack C., Cheikhna Dedah, Walter Keithly, Jr. and Richard F. Kazmierczak. "The Supply of Nutria and the Effects of Harvests on Coastal Marsh Conservation." Presentation given to the Louisiana State University School of Natural Resources, February 24, 2005.

Isaacs, Jack C. "Wildlife Tourism Opportunities in South Louisiana." Presentation during the Acadiana Cultural Showcase, New Iberia, Louisiana, May 18, 2005.

### REPRESENTATION ON TASK FORCES, STUDY GROUPS, AND COMMITTEES

During fiscal year 2004-05, staff members of the Socioeconomic Research and Development Section represented LDWF on the following task forces, study groups and committees:

- Barataria-Terrebonne National Estuary Program's Migratory Bird Action Plan Team
- Center for Natural Resource Economics and Policy, Louisiana State University, Baton Rouge, Louisiana
- Gulf States Marine Fisheries Commission FIN Social/Economic Work Group
- Louisiana Blue Crab Task Force
- Louisiana Clean Marina Program Committee
- Louisiana Geographic Information Systems Council
- Louisiana Seafood Industry Advisory Board
- Ozone Action Committee
- Platforms for Mariculture Task Force Economic Workgroup
- Socioeconomic Panel of the Gulf of Mexico Fisheries Management Council
- Technical Advisory Committee for the U.S. Fish and Wildlife Service's National Survey of Fishing, Hunting and Wildlife-Associated Recreation

### SPECIAL PROGRAMS, PROJECTS, AND SURVEYS

Special programs, projects and surveys administered by the section during fiscal year 2004-05 included the Clean Vessel Program, Customer Service Program, Louisiana Nutria Harvest and Environmental Impact Project, the LDWF Language

Assistance Plan, Louisiana Birdwatching Festivals, Economic Assessment Project, the Louisiana Saltwater Angling Tournament Economic Assessment Project, Louisiana Angler Participation Patterns Survey and the Louisiana Senior Sportsman Survey. A description of each program and a list of accomplishments for fiscal year 2004-05 are presented below.

### **Clean Vessel Program**

The Clean Vessel Program provides funds to owners of recreational boating facilities for construction and renovation of boat sewage disposal facilities. The purpose of this program is to reduce overboard discharge of raw boat sewage in Louisiana's waters by providing boaters with a safe and convenient method to dispose of boat sewage. Under the program, recreational boating facility owners are reimbursed up to 75 percent of the costs of approved activities. Funds are also used to develop and distribute educational and promotional materials to encourage boaters to use these facilities and to promote environmentally responsible behavior.

Accomplishments in 2004-05 included completion of boat sewage disposal facilities at Forsythe Point on the Ouachita River (City of Monroe) and Marina del Ray in Madisonville on the Tchefuncte River, and the distribution of numerous promotional and educational items.

Educational information and/or promotional items were distributed at the following events:

- Sportsman's Paradise Hunting, Fishing and Outdoor Exposition. Gonzales, Louisiana. October 2004.
- National Hunting and Fishing Day. Monroe and Baton Rouge, Louisiana. September 2004.
- National Safe Boating Week. Items distributed by the USCG Auxiliary in Mandeville, Louisiana. June 2005.

### **Customer Service Program**

The Louisiana Department of Wildlife and Fisheries' statewide Customer Service Program was established in 1999 to ensure the delivery of effective, efficient and responsive customer service to Louisiana residents, users of resources managed by the department and departmental employees.

Customer Service Program accomplishments for fiscal year 2004-05 include:

- ongoing upkeep of the customer service comment database and tracking system via the customer service channels.
- development of the fifth annual Customer Service Assessment Report.
- development of the sixth annual Customer Service and Employee Action Plan.
- development and distribution of an internal subject-indexed telephone list, including parish contacts for enforcement, wildlife and inland and marine fisheries.
- development of a subject-indexed telephone list for use by the public placed on the department's Internet contacts page.
- conduction of customer service training of new employees during Employee Orientation classes.
- discussion of the status of the department's Customer Service Program during the Office of Management and Finance's statewide training sessions in March 2005.

- development and implementation of a survey of department employees.
- development and implementation of a survey of license vendors in May 2005.
- presentation of instructional videos during employee safety training classes. Videos discussed the benefits of workplace diversity and the dangers of ignoring educational and training opportunities.

### **Louisiana Nutria Harvest and Environmental Impact Project**

The Socioeconomic Research and Development Section, in cooperation with the LSU Department of Agricultural Economics and the Coastal Fisheries Institute, began a project in fiscal year 03-04 to examine the economics of nutria pelt harvests and the impact of nutria populations on Louisiana's coastal marsh. This project consists of three main stages:

- *Estimation of Supply Curve for Nutria Pelts in Louisiana Coastal Marshes.* This stage developed a supply curve for nutria pelts using historical data for Louisiana nutria harvests and prices plus environmental variables such as winter severity and alligator stock levels. This allowed the estimation of expected harvests under alternative trapper incentive levels (bounties).
- *A Bioeconomic Model of Nutria Harvests and Related Impacts on Louisiana Coastal Marsh.* This research employed a published biological model of nutria populations, marsh biomass and wetland acreage developed by the USGS National Wetlands Research Center in Lafayette, Louisiana in order to examine the efficacy in maintaining coastal marsh of alternative nutria harvests under various price levels. This research provided the basis of a Master's degree thesis in the Louisiana State University Environmental Studies program.
- *Estimation of Nutria Pelt Demand.* This portion of the project examined the factors that influence the trapper-level demand for nutria pelts in Louisiana. Researchers have obtained domestic fur harvest data for several species from the United States Department of Agriculture and international trade data from the United Nations.

### **LDWF Language Assistance Plan**

The United States Fish and Wildlife Service (USFWS), a federal agency that works in cooperation with the Louisiana Department of Wildlife and Fisheries and funds activities conducted by this agency, notified LDWF of the need to develop a Language Assistance Plan (LAP) to improve the access of persons with limited English proficiency (LEP) to LDWF programs.

The Socioeconomic Research and Development Section was given the task of developing an effective language assistance plan for the department. Following the completion of the self-assessment process, the SRD Section started two surveys in January 2005 designed to assess the language assistance needs of its customers.

The first assessment effort focused on department employees' telephone and other personal contacts. For two days of each month, each employee was asked to tally that day's total number of contacts with people from outside the department and to record

how many of these customers exhibited limited English proficiency.

The second assessment effort consisted of a mail survey sent to 20,000 customers, especially commercial fishermen. This survey asked respondents to identify their primary language, proficiency in English and the extent and nature of their interaction with the Department of Wildlife and Fisheries.

These surveys continued through November 2005. An assessment of the results will be published in the spring of 2006.

#### **Louisiana Birdwatching Festivals Economic Assessment Project**

The Socioeconomic Research and Development staff began an investigation into the economic impacts of birdwatching by assessing the financial contributions of birding festivals to two Louisiana towns. The first survey asked attendees of the April 2004 Audubon Country BirdFest in St. Francisville to report the extent of their birdwatching activity and to quantify their expenditures in West Feliciana Parish during the festival. The results of this survey were published in February 2005. The second survey, funded by the Barataria-Terrebonne National Estuary Program, asked attendees of the April 2005 Grand Isle Migratory Bird Festival to describe their birdwatching activities and expenditure patterns in Grand Isle and the rest of Louisiana during the three-day event. The results of this survey were published in the fall of 2005.

#### **Louisiana Saltwater Angling Tournament Economic Assessment Project**

The Socioeconomic Research and Development staff investigated the economic impacts of saltwater fishing tournaments by assessing the economic contributions of two fishing rodeos in Plaquemines Parish. Two similar surveys examined the angling preferences and expenditure patterns of participants in the Faux Pas Lodge Invitational Rodeo in Venice (July 2004) and the Recreational Fisheries Research Institute Fishing Rodeo in Port Sulphur (August 2004).

#### **Louisiana Angler Participation Patterns Survey**

In order to gain insight into the participation patterns and license purchase decisions of Louisiana anglers, survey instruments were mailed to 5,273 licensed anglers in July 2004.

Responses were analyzed and a preliminary report was presented at the 2004 AFS Annual Meeting in August 2004. Analysis continues and a final report is planned for fiscal year 05-06.

#### **Louisiana Senior Sportsman Survey**

In cooperation with the Wildlife Division of LDWF, a survey instrument was developed to gauge the participation in various hunting and fishing activities by purchasers of the Senior Sportsman's License. Surveys were mailed to 10,000 license holders in the spring of 2005. A report on hunting participation is scheduled for February 2006, with a report on fishing activity to follow.

## **ADMINISTRATIVE SERVICES**

The Administrative Services section consists of Purchasing and General Services, whose mission is to provide support services for the Louisiana Department of Wildlife and Fisheries so that the overall mission of conservation of renewable natural resources is accomplished.

The administrative staff works closely with and supports other divisions. More specifically, they assist with agency term contracts and purchasing specific to LDWF, seafood promotions, alligator harvest, timber sales and farm leases.

#### **PURCHASING**

The Purchasing Section consists of three purchasing professionals. This fiscal year we managed 108 contracts and 3,884 other types of purchases. This section also maintained, initiated or updated 20 leases. Purchasing insures compliance with all state and department laws and regulations concerning procurement. Purchasing trains and serves as the help desk for all divisions in the statewide-computerized system called ISIS. The purchasing part of ISIS is called AGPS. The purchasing process continues to improve with the use of the purchasing card. It is now easier for LDWF personnel to make and pay for purchases in a timely manner, reduces the number of purchase orders having to be entered into the AGPS system and has eliminated some usage of petty cash. It has also saved employee time in dealing with vendors in the payment process. Paying via purchasing card has given

LDWF a broader procurement base and allowed us to do business with a variety of vendors who normally do not use purchase orders.

In addition to the above, Purchasing handles rental and payment for statewide postage equipment, copy machines, trash pick up and pest and termite control.

The Purchasing section also manages the fuel card system for fuel purchases and vehicle repairs.

#### **GENERAL SERVICES**

General Services, consisting of one permanent employee and two students, also supports all divisions of LDWF by operating the mail system, receiving all deliveries and shipping all packages for the Baton Rouge office. Over 410,000 pieces of mail were processed this fiscal year. This section is also responsible for duplicating and binding large numbers of documents as required by the divisions. Over 2 million copies were produced on the duplicating machine. General Services maintains the supply room. It is utilized for routine office supplies, envelopes and paper to be distributed to the Baton Rouge office, district offices and remote facilities. Maintaining a minimal inventory on standard office supplies and paper helps the department keep cost down by eliminating the need for each office to order their own standard supplies. Printing of different sizes and types of envelopes is also less expensive when ordered in quantity, thus reducing cost.

# HUMAN RESOURCES

At Wildlife and Fisheries, one of the most valuable divisions is Human Resources, the people who direct all LDWF's other resources and get the work done on behalf of the Louisiana taxpayers, users and consumer of Louisiana's natural resources and products.

The authorized number of employees for LDWF for fiscal year 2004-2005 was 798. LDWF also employed about 55 students throughout the state.

Along with our active employees we also provide service and guidance to retirees, former employees and their dependents.

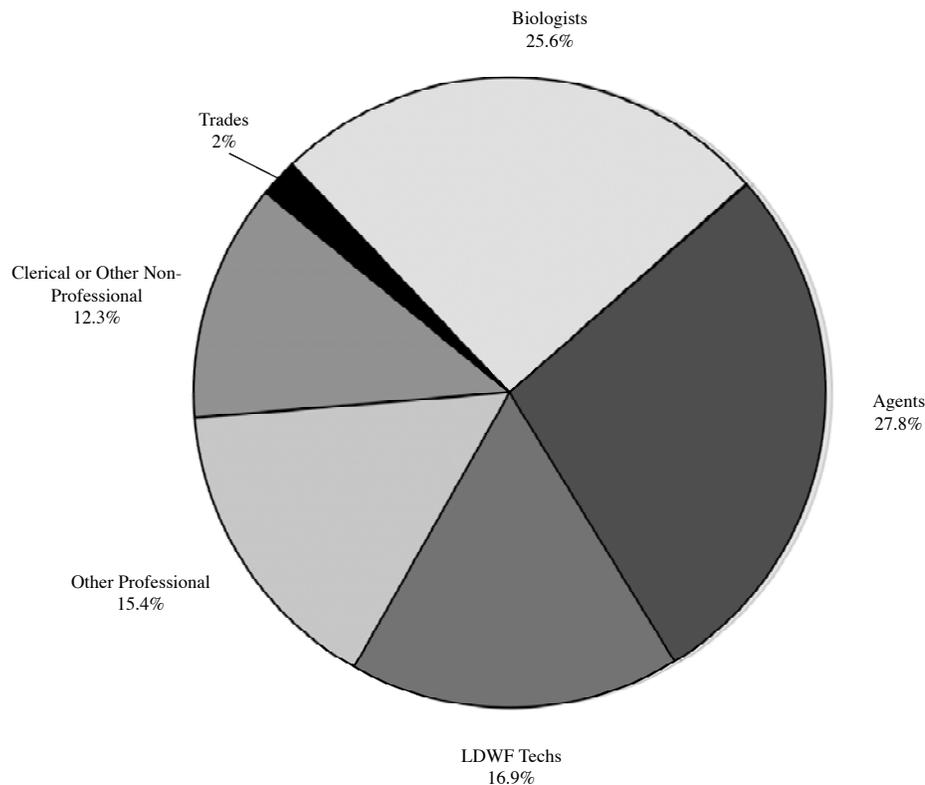
One of the responsibilities of the Human Resource section is the comprehensive administration of our employees' personnel actions. See page 9 for a breakdown of the personnel actions for fiscal year 2004-2005.

Human Resources is responsible for these program areas: Human

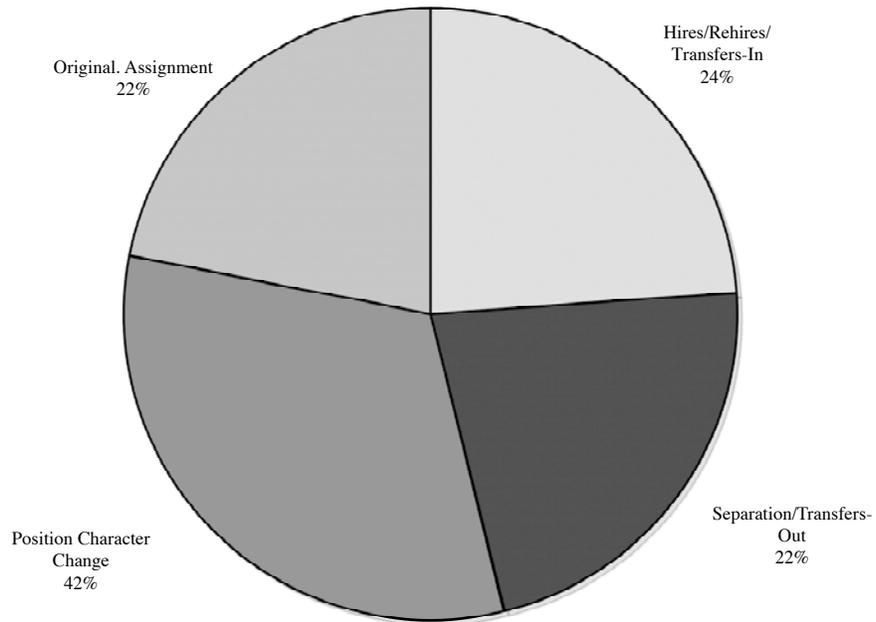
Resource Administration (policies and procedures, civil service rules, layoffs); EEO Compliance (ADA); Performance Appraisal; Training and Staff Development (CPTP, MST, agency sponsored training); Employee Relations (employee counseling, Employee Assistance Program, grievances, drug testing, Rewards and Recognition Program); Classification (position descriptions, job studies, audits); Wage and Salary Administration; Recruitment Program; Selection and Placement; Benefits Program (health, life and miscellaneous insurance, retirement, workers compensation, leave management, unemployment, and FMLA); Employee Administration (employee files, personnel actions, enrollment and exiting of employees); Payroll Administration (ISIS system); Safety; and Affirmative Action.

In an effort to enhance safety and productivity in the LDWF work force, we continue to work with employees and management through several programs such as Safety, Planning and Performance Review, and Training and Staff Development.

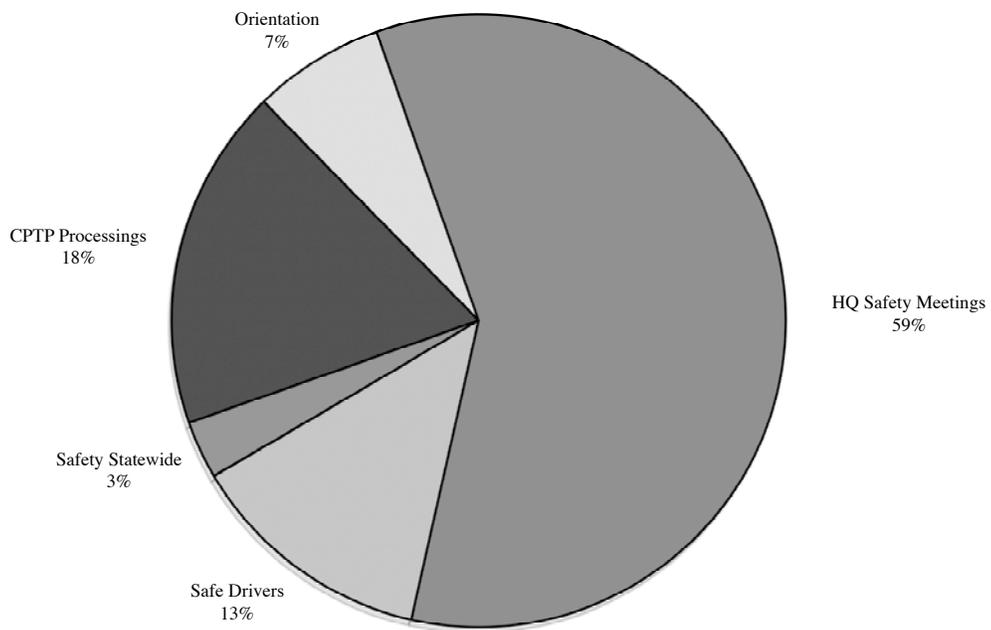
## Workforce Breakdown by Classified and Regular Unclassified Job Title



**Breakdown of Employee Actions**  
*Total Number of Employee Actions: 553*



**LDWF Training and Staff Development**  
**Fiscal Year 2004-2005**  
*Total Number of Employees Trained: 1,082*



# PROPERTY CONTROL

The Property Control Section is responsible for managing the department's property, fleet management and risk management programs. The section is staffed with three full-time employees.

## PROPERTY CONTROL PROGRAM

During fiscal year 2004-2005 this program certified a moveable property inventory which consisted of 7,977 items for a total acquisition cost of \$42,874,577. Annually, the program is responsible for ensuring that a physical inventory of moveable property is conducted at the various 88 locations throughout the state.

The Property Control Section processed \$4,097,610 in acquisitions and dispositions exceeding \$3.5 million of inventoried moveable property during fiscal year 2004-2005.

## FLEET MANAGEMENT PROGRAM

In accordance with State Fleet Management Regulations this section records, approves and processes requests for personal assignment or

home storage, daily vehicle usage, vehicle maintenance, titles and registrations and vehicle licenses for the department's 566 fleet and 570 other licensed vehicles.

The Property Control Section also manages the 11 vehicles assigned to the Baton Rouge Headquarters Motor Pool.

## RISK MANAGEMENT PROGRAM

The Property Control Section is responsible for filing insurance claims and recovering payment from the Office of Risk Management and third party insurance companies for property damage, automobile physical and liability damage, wet marine, aviation, boiler and machinery damage. Approximately \$292,848 was paid during fiscal year 2004-2005 for claims filed.

Driver's authorization and annual certification for the department's approximate 800 employees is also a responsibility of the Property Control section. This process is accomplished in accordance with Office of Risk Management's Loss Prevention guidelines.

# FISCAL

The Fiscal Section is staffed by 13 employees and is responsible for all financial operations of the department. The main goal of the Fiscal Section is to achieve compliance with all applicable laws, rules, policies and regulations governing the activities managed. The staff develops and implements fiscal controls, provides advice, assistance and training and standardizes procedures. In addition to the units and functions described below, this section is also responsible for directing the department's strategic planning and performance measurement activities.

## BUDGET/EXPENDITURE CONTROL/ FEDERAL REPORTING

The duties of the Budget/Expenditure Control/Federal Reporting Unit include developing and compiling the department's annual budget request package, monitoring the expenditures of the department's seven appropriated programs, ensuring correct coding in the state's accounting system, preparing the department's annual financial report and preparing quarterly and year-end federal financial reports on all grants

## CONTRACTS

During fiscal year 2004-2005, the Contracts Unit reviewed and processed 128 new professional service and consulting contracts and 227 contract payments. This unit is also responsible for all telecommunications functions for the department including payment of 180 monthly cellular phone bills, payment of the monthly line services through the State Office of Telecommunications and handling all service and repair orders statewide. In this reporting period, there were 213 service/repairs orders processed. The duties related to liability insurance exposure reporting to the State Office of Risk Management are also assigned to this unit.

## ACCOUNTS PAYABLE

The section's Accounts Payable Unit processes payments to all vendors through the state's financial information system and payments to employees for travel and petty cash reimbursements through an in-house system. In fiscal year 2004-2005, a total of 13,014 checks were processed through these two systems. This unit also reviews, audits and enters expenditure coding for all LaCarte (VISA) purchasing statements. In this fiscal period approximately 4,733 of these statements were received and processed.

## AUDIT

The Audit Unit is responsible for collection of severance taxes on oysters and fur, issuance of fill material permits and collection of fill material royalties and shrimp excise taxes established by law and owed to the department. The revenue from these sources amounted to \$706,650 in 2004-2005.

## REVENUE

The Revenue Unit receives, deposits and classifies funds owed to the department from various sources. A total of \$25.6 million was processed by this unit in 2004-2005. The unit is also responsible for the functions related to the civil restitution program and collection of class one violation fines. In fiscal year 2004-2005, the unit issued 229 civil assessments for \$169,783 and received payments on 267 cases totaling \$79,197. During this period, the unit also received payments on 2,174 class one fines totaling \$147,716.

# **OFFICE OF WILDLIFE**

*The Office of Wildlife consists of two divisions, the Wildlife Division and the Fur and Refuge Division.*

## **WILDLIFE DIVISION**

The Wildlife Division is responsible for the state's wildlife conservation program and gathering biological data to properly manage wildlife resources.

## **FUR AND REFUGE DIVISION**

Active marsh management is the primary responsibility of the Fur and Refuge Division. Responsibilities of the division are divided into eight major categories: Coastal Stewardship Operations; Fur and Marsh Management; Alligator Management; Permitting and Mineral Management; Rockefeller Refuge; Habitat Conservation; Education and Maintenance.



## RESEARCH AND MANAGEMENT

A wide range of research and management work is conducted in order to maintain healthy productive populations of game and to provide recreational opportunities for citizens to enjoy these species. Staff biologists gather data on game birds and animals, largely for use in formulating hunting regulations and development of habitat management recommendations. They develop workshops for the department and other agencies' personnel training and present seminars to the public. In addition, they represent the department on state, regional and national committees, providing wildlife input to a wide array of public agencies, NGOs and private industry. The game species programs are white-tailed deer, upland game, wild turkey and waterfowl.

## WHITE-TAILED DEER

During the 2004-2005 deer season, 109,000 deer hunters in the state harvested 252,000 white-tailed deer. On wildlife management areas (WMAs) during managed deer hunts, there were 2,532 deer harvested. The total hunter effort for the managed deer hunts was 28,574. The Deer Management Assistance Program (DMAP) cooperators harvested 20,863 deer. There were 1,061 clubs and landowners enrolled in this program. The Louisiana Antlerless Deer Tag Program (LADT) harvest in 2004 was approximately 7,580 with 530 cooperators enrolled.

Deer harvest information was entered into a computer program for analysis and evaluation. This data was used to establish deer seasons for the 2005-2006 season. Harvest data for WMAs and DMAP cooperators are summarized in Federal Aid W-55-19 Report.

The fourth LA Big Game Recognition Program booklet is available from the Deer Program of the Wildlife Division. Deer harvested during the years 2004-2006 will be documented in the fifth LA Big Game Recognition Program. Trophy deer that qualify for the State Record List are added to that list annually.

Disease and parasite investigations continued on both private and public lands. An experimental antler regulation program was initiated on the Thistlewaite WMA. Deer herds were again sampled for Chronic Wasting Disease (CWD) in 2004. Over 1,000 samples were collected from around the state and all samples tested negative for the disease. A new strain of the BTV virus was found in St. Mary parish and further sampling for this will be done in 2005.

## UPLAND GAME

### Dove

Populations have been monitored nationwide since 1953 by a call-count survey. This survey is used by the U.S. Fish and Wildlife Service to monitor mourning dove population trends. Biologists record the number of doves heard calling for a prescribed time during the nesting season along certain roadsides. Louisiana's dove population is monitored during May and June along 19 routes randomly located throughout the state. The Louisiana breeding population index based on doves heard along the routes was 16.0. This represents a 16.8 percent increase in doves heard from 2004. The 10-year and 40-year trends illustrate increases of at least 1.3 percent annually.

Dove hunting regulations for Louisiana in 2004-2008 were set at 70 days with a bag limit of 12 birds. Shooting hours remained unchanged from the year before, allowing all-day hunting, except on opening weekends of each segment when hunting was restricted to afternoons only. A survey of resident license holders indicates that approximately 45,600 Louisiana hunters harvested about 805,000 doves during the 2004-2005 hunting season.

In addition to dove fields on WMAs, the department leases property from private landowners for public hunting. This land is leased for public hunting on opening day only. In 2004, two fields totaling 2,750 acres were leased. During the opening day hunt, 651 hunters participated, bagging 2,634 doves.

In the spring of 2003, the U.S. Fish and Wildlife Service adopted a National Mourning Dove Harvest Management Plan. The plan was stepped down to each management unit during 2003-2004. Determining current harvest rate was identified as a key component of each management unit plan. Wildlife Division personnel banded almost 1,300 doves during July and August 2004 as part of a 26-state pilot banding program.

### Quail

Statewide fall whistling counts were conducted on 38 randomly located routes and an additional five routes on department WMAs and the Kisatchie National Forest. All regions of the state except the south-central region exhibited decreases from the prior year. The south-central region exhibited an increase from the prior year. Inferences about population status and habitat conditions were developed based on the combined results of these two survey techniques and general observations by department personnel during the breeding season. Data are summarized in the Federal Aid W-55-19 Annual Report.

A survey of resident license holders indicates that approximately 2,000 Louisiana hunters harvested 18,000 quail during the 2004-2005 season.

Work continued on a research project to investigate response of bobwhite quail to habitat enhancement by use of selective herbicides that was begun in the fall of 2001. The department contracted with the LSU School of Renewable Natural Resources to conduct this project.

In an effort to address long-term population declines in bobwhite quail and other birds dependent on grassland habitat, the department has formed the Louisiana Quail and Grassland Bird Task Force. The task force is composed of representatives from at least 18 organizations or agencies and is charged with developing and implementing a plan to address the population declines of bobwhites and other grassland birds.

### Woodcock

A woodcock banding program was initiated in 1990 to determine sex and age ratios, site fidelity, movement patterns and harvest rates of woodcock wintering in Louisiana. From November 2004 through January 2005, 373 woodcock were banded on Sherburne WMA. Sixty direct band recoveries (15.5 percent) by hunters

were reported. Hunters on Sherburne also provided data on hunt characteristics through use of mandatory self-clearing stations. Data are summarized in the Federal Aid W-55-19 report.

The department participated in the U. S. Fish and Wildlife Service's Annual Woodcock Wing Bee in 2005. Data derived from aging and sexing about 11,000 woodcock wings were used to develop trend data on woodcock production and hunter success. These data, in combination with breeding bird surveys, are used to develop management strategies for woodcock. Although many people in Louisiana consider woodcock an underutilized species, Louisiana's harvest of woodcock at one time ranked among the nation's highest. However, the number of woodcock hunters has decreased by over 90 percent since their peak in the early 1980s. A survey of resident license holders indicates that approximately 3,000 Louisiana hunters harvested 10,000 woodcock during the 2004-2005 season.

### **WILD TURKEY**

A poult production survey was initiated in 1994 to assess annual brood rearing success and monitor long-term production trends. The survey indicated a good to very good hatch throughout much of the northern portion of the state. In the south central and south-east regions production was poor.

The most recent hunter harvest survey indicated 26,000 turkey hunters harvested 11,300 wild turkeys during the spring of 2004. The wild turkey population in Louisiana is estimated at about 80,000 birds.

The department is supporting and participating in two wild turkey research projects. Wild turkey habitat use and ecology are being investigated on Sherburne WMA by a graduate student from the LSU School of Renewable Natural Resources with support from the Department of the Louisiana Chapter of the National Wild Turkey Federation. In addition, the department is involved in a gobbler banding project in Washington Parish to develop harvest rate estimates. A reward band component was added to this project during the 2004 turkey hunting season.

### **WATERFOWL**

Louisiana has approximately 3.5 million acres of coastal marsh that winter large and diverse waterfowl populations. Aerial waterfowl inventories of the entire coastal marsh, as well as associated agricultural lands in north central and northeast Louisiana are conducted each winter.

The mid-winter inventory, conducted in early January, indicated 3.08 million ducks and 586,000 geese wintered in coastal marsh and inland areas of the Mississippi Delta during January 2005.

Based on federal harvest estimates, in the 2004-2005 waterfowl hunting season there were 52,000 active duck hunters that harvested 822,000 ducks. This represents a 21 percent decrease in the number of duck hunters and a decrease of 37 percent in the duck harvest compared to the previous year. Species composition included 22 percent gadwall, 19 percent blue-winged teal, 14 percent green-winged teal, 10 percent mallard, 9 percent wood duck, with pintail, shoveler, wigeon, scaup and ring-necked duck comprising most of the remainder.

Goose harvest decreased by 30 percent in 2004-2005 to 120,000. White-fronted geese comprised 44 percent of the harvest and light geese (snows, blues and Ross') 56 percent. Canada geese are an important bird in the bag locally, but were less than 1 percent of the total goose harvest statewide.

### **North American Waterfowl Management Plan**

Louisiana is continuing to play an important role in the North American Waterfowl Management Plan (NAWMP). Large portions of two joint ventures are located in Louisiana: the Gulf Coast and Lower Mississippi Valley. The department has strived to maintain ongoing projects and other activities associated with the NAWMP. In 2004-2005, survey, engineering and design work was completed on the Manchac Shoreline Protection project funded by a North American Wetland Conservation Act (NAWCA) grant, and another NAWCA grant proposal was submitted to purchase bottomland hardwood habitat within the Sabine Island WMA. On the Topan Unit of the Boeuf WMA, bids were accepted, a road improved, and a support pad was constructed for two water wells that will provide early water for shorebirds, blue-winged teal and other waterfowl. In addition, funding, equipment, personnel and coordination was provided for two major waterfowl research projects of high priority to NAWMP joint ventures in Louisiana: the Lesser Scaup project conducted by Michael Anteau and the Mallard Telemetry project conducted by Bruce Davis and Paul Link. Both research projects are supervised by Dr. Alan Afton. Department personnel also assisted with the NAWMP program assessment, the Catahoula National Wildlife Refuge review, and the NAWMP effort to support continued Conservation Reserve Program contracts that provided breeding habitat in northern prairie areas.

The Louisiana Waterfowl Project, a private land wetlands development program, has completed its 14th year. This is a cooperative statewide program involving LDWF, Ducks Unlimited, U.S. Department of Agriculture/Natural Resource Conservation Service, various pipeline companies and selected private landowners. The U.S. Fish and Wildlife Service became a partner in 1999-2000. During 2004-2005, 18 new landowners participated in LWP resulting in the restoration or enhancement of 4,835 acres. Since program inception in 1992, over 70,000 acres have been restored or enhanced. LWP goals and activities in the northern part of the state continue to shift more towards the Red River Valley, toward more natural marsh or green-tree habitats and less agricultural areas. LWP south will focus more on marsh habitats and fallow rice fields in the coastal zone.

### **Wood Ducks**

During 2004, the department banded 1,605 wood ducks, over twice as many as the 791 banded the year before. Approximately 484 were captured in nesting boxes, and 1,121 were captured using cannon nets.

The wood duck box program completed its fifteenth year in 2004. Department personnel are now on a maintenance schedule for nest boxes with over 2,800 boxes now in use. LDWF focus is to replace old boxes rather than add to the total. Over 1,100 of those boxes are within Region 6. Box utilization is not evaluated every year, but has ranged from 45 to 100 percent in past years with an average utilization of about 80 percent.

## **LAND DEVELOPMENT**

Land development involves both wildlife habitat enhancement and infrastructure improvement to accommodate public use of the 49 WMAs. Typical activities include road and bridge repair and construction, vegetation control, tree planting, water control structure operation, pump station operation, wildlife food plot development and boundary maintenance. Coordination and monitoring of mineral exploration activities is also a function of the Wildlife Division on WMAs.

## **FOREST MANAGEMENT**

The mission of the Forest Management Program is to improve forest and wildlife habitat on WMAs through sound forest management, reforestation practices and active forest/wildlife research activities. This program also serves to demonstrate the integration of forest management and wildlife habitat management to private landowners.

Public Lands: General forest inventories were conducted on 18 scheduled compartments of 13 WMAs; Two compartment inventories on two different WMAs were postponed due to treatment backlogs and WMA access problems. Prescription developments were also delayed to fiscal year 2005-2006 due to treatment backlogs on the WMAs.

Harvest preparations, including sale layout, inventory, regeneration counts, marking, map work and proposal preparations, were conducted on Big Lake, Boeuf, Buckhorn, Little River, Ouachita, Pearl River, Red River, Russell Sage, Sherburne and Three Rivers WMAs. Renewed market interests and increased activities across the state resulted in our ability to increase our activity on past prescribed habitat treatments. Timber harvests to improve wildlife habitat were conducted on Buckhorn, Grassy Lake, Lake Ramsey, Red River, Russell Sage, Sandy Hollow, Sherburne and Three Rivers WMAs. Monitoring of these operations was performed by Forestry Section staff, with assistance from WMA technicians. Coordination was continued on Dewey Wills WMA with several research organizations attempting to establish an understanding of the oak decline we are experiencing on this area. Additional habitat treatment was accomplished on Sherburne WMA through chemical treatment of the non-native invasive species Chinese tallow tree. No Southern pine beetle infestations/outbreaks were reported on WMAs this year, only small spots developed due to lightning strikes and/or prescribed burning hot spots.

Reforestation work was continued on other department properties with concentration on Bayou Macon, Buckhorn, Dewey Wills, Pointe-aux-Chenes, Red River, Spring Bayou and Three Rivers WMAs. Activities included site development and preparation, seedling or seed planting, survival plot establishment and survival checks. Approximately 1,125 acres were reforested during the 04-05 season, including 775 acres of ag fields, 340 acres of timber harvest areas and 10 acres of replanted areas.

Acorn and various tree seed collections were conducted to ensure a seed and seedling source for future reforestation efforts. The annual WMA mast survey aids this effort by concentrating collection efforts where the most needed types of trees species are available. The mast survey also provides an indication of the future abundance of forest wildlife species such as squirrels.

TSI work continued on Sherburne with an attempt to control Chinese tallow tree invasion by injecting the mature seed producers along the Atchafalaya River levee and the major rights-of-way leaving the levee road. Additional control was accomplished in forest treatment areas. Similar work was carried out on Sandy Hollow for Chinese tallow tree and cogon grass control.

GPS work on WMA trails, roads, lakes, compartment and area boundaries was accomplished to aid in the overall WMA management program. Our GIS program development continued with emphasis on historical data input relative to our WMA forest management activities and addition/deletion of roads/trails that could be used for management.

Growth Monitoring Plots (GMPs) were established at Alexander State Forest, Pomme de Terre and Sicily Island Hills and completed on Boeuf WMA. These permanent plots aid in monitoring habitat conditions and effects of our forest management program on the habitat components represented on the WMAs.

A Monitoring Avian Production and Survival (MAPS) project was extended on Sherburne WMA within the natural area and a group select harvest area, Compartments 7 and 8 respectively. Forestry Section personnel provided the primary support for this project, expected to continue for 10 years. Results from this study will aid in understanding avian use of the different silvicultural treatments applied across the WMAs.

Research projects and new developments continued on WMAs to foster a better understanding of benefits for the forest, wildlife and people gained through appropriate and long-term oriented forest management practices.

## **LAND ACQUISITION**

Land acquisition and development for wildlife management purposes is the best way to ensure that there is sufficient quality habitat for the state's diverse wildlife resources. During fiscal year 2004-2005, one acquisition for a total of 122.7 acres was completed and added to Tunica Hills WMA in West Feliciana Parish.

Leasing of land is also an important component of the WMA system. Forest Capital Partners, LLC (FCP) acquired over 36,000 of forest land that was included in Sabine, West Bay and Boise-Vernon WMAs. Subsequent to the acquisition, FCP entered into a 25-year free lease agreement with the department, retaining the acreage in the WMA system. As a result of the acquisition, Boise-Vernon WMA was renamed Clear Creek WMA.

## **REGION I**

Region I is located in northwest Louisiana and consists of seven parishes: Bienville; Bossier; Caddo; Claiborne; DeSoto; Red River; and Webster. Habitat consists primarily of rolling, mixed pine-hardwood and pine plantation habitat bisected by the Red River system and its associated bottomland agricultural lands. The Bayou Pierre, Bodcau, Jackson-Bienville, Loggy Bayou and Soda Lake WMAs are located within the region and encompass a total of 78,124 acres.

Personnel from Region I administered and managed numerous Wildlife Division programs. Programs included bobwhite quail spring and fall surveys, annual winter eagle surveys, spring dove

call routes, dove banding, mast surveys, spring turkey gobble count surveys, turkey trapping, banding and release activities, and administered the game and non-game breeder permit program. Personnel also collected white-tailed deer for general herd health and reproduction projects, CWD monitoring and also administered DMAP activities. Personnel served as technical wildlife consultants to numerous private landowners, municipalities and state and local government officials and agencies.

Region I WMAs are managed to provide diverse wildlife habitat supporting numerous game and non-game wildlife species, and provide quality outdoor recreational opportunities for the public. A total of 33,100 user days were estimated for Region I WMAs. Region I personnel continued working with the Jackson-Bienville Wildlife Habitat Program which provided more than \$25,000 of non-department revenue for the development of bobwhite quail, turkey and red-cockaded woodpecker habitat on Jackson-Bienville WMA. Funds were also provided to promote hunter safety and wildlife management education.

### **REGION II**

Region II is located in northeast Louisiana and consists of eight parishes: East Carroll; Jackson; Lincoln; Morehouse; Ouachita; Richland; Union; and West Carroll. Habitat types consist of rolling, mixed pine-hardwood forest, agricultural lands and Mississippi River bottomland forests. The Bayou Macon, Big Colewa Bayou, Floy Ward McElroy, Ouachita, Russell Sage and Union WMAs are located within the region.

Region II biologists conducted a wide range of activities including research and surveys involving Canada geese, wood ducks, wild turkey, bald eagles, bobwhite quail, shorebirds, white-tailed deer, waterfowl and other species. Additional effort was expended conducting public meetings, providing technical assistance to landowners relative to habitat management and wildlife populations, interacting with various universities as well as parish, state and federal agencies in reference to projects of mutual concern, conducting the alligator management program at the region level, and numerous additional projects.

Region II WMAs were managed to provide habitat and population management for deer, turkeys, squirrels, waterfowl, rabbits, doves, shorebirds and other non-game birds, furbearers and other species. Recreational opportunities were provided to thousands of hunters, fishers, campers, sightseers and other public users. Recreational user days recorded for Region II WMAs totaled 33,436. Either-sex modern firearm hunts for deer attracted 2,951 hunters resulting in a harvest of 363 deer.

Additional opportunity for bucks-only gun hunting, muzzleloader, archery and youth-only hunting yielded a reported harvest of 121 additional deer. Youth deer and dove hunters on the Floy McElroy WMA had a very successful season. Turkey hunting was provided on Bayou Macon and Union WMAs. A first-ever youth turkey hunt was held on Union WMA in cooperation with the Union Parish Chapter of the National Wild Turkey Federation. Ouachita and Russell Sage WMAs provided quality waterfowl hunting for several thousand persons including some who traveled from Missouri, Arkansas, South Carolina, Mississippi, Texas and other states.

Wildlife management area personnel performed a variety of development and maintenance functions such as boundary marking, road maintenance, water control structure operation, moist soil management, beaver and other nuisance animal control, farm contract supervision, equipment maintenance, public user data collection, vegetation control, food plot planting, reforestation, and conducting managed hunts. The headquarters/check stations on Floy McElroy WMA and Union WMA were improved to provide better customer service. Two miles of public access roads were re-surfaced with limestone rock on the Ouachita and Russell Sage WMAs.

### **REGION III**

Region III is located in west central Louisiana and consists of six parishes: Grant; LaSalle; Natchitoches; Rapides; Sabine; and Winn. Habitat consists primarily of piney woods. Dewey W. Wills, Little River, Alexander State Forest, Camp Beauregard and Sabine WMAs are located within the region.

A variety of projects were implemented or completed on Region III WMAs in 2004-2005. Efforts to improve the road system on Dewey Wills and Little River WMAs were hampered by lack of funding. The Office of Rural Development awarded a competitive grant to improve the ATV trail system on Dewey Wills WMA. Work began the last quarter of 2004-2005 with completion scheduled by September 2005. Plans to rebuild the pumping station on the Dewey Wills WMA greentree reservoir were developed and initial phases of reconstruction were started. The food plot programs on Sabine and Camp Beauregard WMAs were expanded. A special lottery deer hunt for the physically challenged was implemented on Sabine WMA in cooperation with the Wheeling Sportsman Association. For one weekend, a large portion of the WMA is set aside strictly for the special hunt. Temporary stands are erected and volunteers and LDWF staff assist participants. The program was well received and plans call for expansion in coming years.

Negotiations with Louisiana State University at Alexandria to enter their property into a wildlife management program were not successful. However, a wood duck nest box program was implemented. In addition it is possible that some limited public access for recreational uses can be provided in the future.

Catahoula Lake and Elbow Slough are additional areas of responsibility. All of these areas are managed to provide wildlife habitat and outdoor recreational activities. Total user days were estimated at 178,029.

Routine maintenance activities on the state owned areas included road grading, culvert replacement, spot repairs, drainage improvements and beaver control. On all WMAs boundary work, sign replacement, self-clearing station maintenance, vegetation control, equipment and facility upkeep were performed. In addition WMA personnel conducted user interviews and operated weigh stations. Wildlife food plots were planted on Camp Beauregard, Sabine and Elbow Slough. Most WMAs have a number of wood duck boxes that require annual maintenance. Region III procured wood duck boxes for statewide distribution. The technical staff consulted with DMAP clubs and private landowners on wildlife and habitat management issues, trapped and band-

ed wood ducks, collected CWD samples, participated in the dove banding program, compiled data and submitted reports, and handled miscellaneous problems along with routine duties.

#### **REGION IV**

Region IV is located in east central Louisiana and consists of six parishes: Caldwell; Catahoula; Concordia; Franklin; Madison; and Tensas. Habitat types of this region are very diverse, ranging from upland mixed pine-hardwood forests in the west to the bottomland hardwood forests along the Mississippi River. Agricultural lands generally dominate the landscape, but the alluvial floodplains of the Boeuf, Black, Red, Ouachita, Tensas and Mississippi Rivers produce a rich and varied topography that supports a bounty of resident and migratory birds and mammals.

Centrally located in the town of Ferriday, the regional office administers six department-owned WMAs. Big Lake, Boeuf, Buckhorn, Red River, Sicily Island Hills and Three Rivers WMAs provide the public with almost 161,000 acres on which to hunt, fish and enjoy the natural areas of our state. The self-clearing check stations of Region IV recorded over 34,000 hunters and fishermen during 2004-2005, and almost 6,300 non-consumptive users (campers, backpackers, ATV riders, birdwatchers, etc.) can be added to this total. Estimated numbers of hunters, fishermen, and non-consumptive users of Region IV WMAs exceed 123,000.

Deer hunting continues to attract the most hunters to Region IV, and 16,052 deer hunters harvested 1,532 deer from WMA public lands. Archery, muzzleloader and rifle seasons attract resident hunters from every parish in the state and from many other states. One out of every 10 Region IV WMA deer hunters harvested a deer, an average that compares favorably with any public land in the Southeastern states. Soil fertility of the region produces browse vegetation with exceptional nutrition, and the chance of a WMA deer hunter harvesting the buck of a lifetime has never been better. The department's efforts in forestry management and restoration are recognized nationally, but Region IV deer hunters have known for decades that it produces trophy class deer.

Almost 6,500 small-game hunters enjoyed a relaxing squirrel and/or rabbit hunt on Region IV WMAs. Whether a small game hunter chooses to still hunt or follow his pack of favorite beagles or a mountain cur squirrel dog, the opportunities are available. The department continues to develop moist soil impoundments and greentrees for waterfowl hunters in Region IV, and the possibilities for acquiring former agricultural lands make expansion of waterfowl opportunities even greater. Turkey populations continue to expand after a decade of good poult production, and just over 1,300 turkey hunters harvested 71 turkeys on WMA property.

LDWF recognizes that the future of hunting and the outdoor sports depends on the involvement of our youth. Youth turkey hunts on Big Lake WMA and youth deer hunts on Boeuf and Red River WMAs have been popular events, and these opportunities will probably be expanded throughout Region IV.

Region IV WMAs hosted six UKC and PKC field trials and championship coon hunts during 2004-2005. The topography of the WMAs and the abundant coon population attract coon hunters and high-priced coon dogs from around the state.

Previous reference has been made to "civilized" non-consumptive uses on the Region IV WMAs, but nothing compares to the spectacle of the Wish I Could ATV Trail Ride held annually on Boeuf WMA. On June 4, 2005, 3,914 ATVs entered the WMA to attempt the Marengo Swamp Suicide Run, a 17-mile long trail ride through some of the muddiest and boggiest terrain in the region. Some riders completed the course, and some didn't.

Private landowners in Region IV continue to respond positively to LDWF DMAP and LADT. Two hundred twenty-one private landowners and hunting clubs enrolled 354,000 acres of property into the program. From this enrolled acreage deer hunters harvested almost 4,600 deer (31 percent antlered bucks and 69 percent antlerless deer). As part of the program, Region IV biologists provide these private landowners with biological habitat surveys and harvest recommendations.

If questioned, most people would associate Louisiana alligator hunting with our coastal marsh and swamp habitats. But alligator hunting is becoming more and more popular every year in northeastern Louisiana. During 2004, the Region IV alligator program issued 470 tags to alligator hunters (310 tags to private land hunters and 160 to public lakes hunters). Three hundred twenty-two (69 percent) tags were used by 106 hunters. Alligator hunting in the Louisiana coastal zone may be largely seen as a commercial activity, but in northeastern Louisiana it is commonly enjoyed as a social event. Entire families submit applications for the public lakes lottery, and in recent years more than 3,000 applications have been submitted each year by the public. Region IV alligator hunters continue to take trophy-size 12-to 13-foot gators.

During June 2005, Region IV hosted a team of eight volunteers from the AmeriCorps National Civilian Community Corps on Buckhorn WMA. Despite hot weather, high humidity, poison ivy and biting insects, this group constructed Phase 1 of the Brushy Lake Nature Trail. This public use facility consists of two interconnected nature trails totaling three miles in length. The volunteer team built a 60-foot over-water boardwalk, upgraded a gravel parking lot, added trail signs, built wooden fencing and picnic tables and demolished an abandoned hunting shack. Future plans for Phase 2 of the project consist of a 320-foot boardwalk and gazebo spanning the northern end of Brushy Lake. When completed, this facility will provide year round enjoyment and public education into the aquatic and terrestrial components of a bottomland hardwoods ecosystem.

#### **REGION V**

Region V is located in southwest Louisiana and consists of nine parishes: Acadia; Allen; Beauregard; Calcasieu; Cameron; Evangeline; Jefferson Davis; Vermilion; and Vernon. Habitat ranges from extensive coastal marshes, to prairies and vast agricultural areas, to hardwood bottoms, to rolling hills of pine plantations and mixed pine-hardwoods. Clear Creek, Fort Polk, Marsh Bayou, Peason Ridge, Sabine Island, Walnut Hill and West Bay WMAs are located within the region and encompass a total of 260,000 acres.

Region personnel administered a variety of Wildlife Division activities. These include environmental assessments, technical assistance, research, planning, development, management and

alligator and nuisance animal programs. Technical advice is provided to the public, federal, state and national wildlife refuges and local agencies. Region personnel assist 223 private deer hunting clubs encompassing 370,000 acres with the departments DMAP and LADT. The region personnel participated in a nation wide dove banding program by trapping and banding 200 doves. Special public dove hunts were held on 800 acres of land, which the department leases, in September 2005, with 257 hunters harvesting 488 doves. Region V handles a large number of resident alligator hunting applications issuing 92 licenses, 875 tags and 17 non-resident alligator hunting license and the shipping requirements of alligator hides.

The region WMAs were managed for a variety of fish and wildlife species and provides outdoor recreational opportunity. These areas are readily accessible and are very popular with the public. Along with public hunting and fishing opportunities, these areas provide many types of non-consumptive activities. A total of 44,972 people (359,776 hours of recreation) used these areas from November 2004 through October 2005.

Managed deer hunts on the four largest WMAs within the region resulted in 16,133 hunting efforts and harvesting 849 deer. Two areas offer special deer seasons for youth and handicapped hunters. Over 1,563 turkey hunters harvested 52 gobblers from three WMAs. Special youth turkey hunting seasons were established on two areas which were great successes.

The WMAs are leased free of charge to the department for public use from private landowners: Forest Capital Partners LLC; Roy O. Martin; U.S. Army; U.S. Forest Service; Forest Investments; Calcasieu School Board; Mopar; and the State of Louisiana. To continue these lease areas, region personnel are required to meet and negotiate annual agreements with the landowners. The leases help the landowners properly manage their properties for wildlife and public recreation.

Habitat Manipulation co-partnered with Cleco Power and National Wild Turkey Federation to establish turkey food plots on service right-of-ways and abandoned roads within Boise Vernon and West Bay WMAs. They also co-partnered with U.S. Army and U.S. Forest to establish turkey and quail food plots on Fort Polk WMA.

## REGION VI

Region VI is located in south central Louisiana and consists of 13 parishes: Avoyelles; Assumption; most of Iberville; Iberia; Lafayette; Pointe Coupee; St. Landry; St. Martin; St. Mary; Terrebonne; West Baton Rouge; and portions of West Feliciana and Ascension Parishes. Habitat types range from mixed pine-hardwoods, to backwater bottomland hardwoods interspersed with agricultural lands, and cypress-tupelo swamps, to open-water areas. Acadiana Conservation Corridor, Attakapas, Elm Hall, Grassy Lake, Pomme de Terre, Sherburne, Thistlethwaite and Spring Bayou WMAs are located within this region and encompass a total of 117,877 acres. There are also one federal refuge and one U.S. Army Corps of Engineers property managed within the region.

Region VI personnel administer and manage a variety of wildlife oriented activities. They work in conjunction and provide techni-

cal advice to many different agencies such as USFWS, USACOE, DNR, DEQ, Department of Agriculture and other state agencies and local parish entities. Region personnel administer environmental assessments, technical assistance, research, development/management and alligator and nuisance animal programs. They assist with projects ongoing in the region, such as woodcock, turkey, black bear and non-game research projects. Region biologists worked with 230 DMAP clubs encompassing over 501,000 acres on which approximately 8900 deer were harvested. In addition to DMAP, LADT tags were issued to 122 cooperators, involving 97,038 acres on which approximately 1,436 deer were harvested.

Region VI WMAs are maintained and managed to provide outdoor activity opportunities for all user groups, including both consumptive and non-consumptive. Recreational user days recorded on Region VI WMAs totaled 87,156 by hunters, fishers, campers, sightseers, bird-watchers and other public users. Managed deer hunts were held on these areas, where over 11,100 user-days were recorded, with 566 deer recorded harvested on these hunts. In addition to the managed (either-sex gun) hunts, bucks only, youth/handicapped, archery and muzzleloader hunts also take place, where an additional 451 deer were harvested. Turkey hunts were held on three WMAs, where 47 turkeys were harvested by an estimated 1,005 users. Dove fields are maintained, along with many acres of food plots. Region personnel maintain WMA boundaries, buildings, equipment, roads and trails. Biologists and technicians maintain and monitor over 800 wood duck boxes, conduct pre-season banding, collect samples for Chronic Wasting Disease and other disease testing, respond to numerous nuisance animal complaints, illegally held deer and fawn/sick deer complaints.

Youth Lottery Deer, Duck, and Turkey hunts were established in the region, with great success on these hunts.

Improvements to region WMAs included six deer box stands built for Special Lottery Youth Hunts, three duck blinds built for Special Youth Lottery Duck Hunts, renovations to the bunkhouse at Spring Bayou WMA headquarters, which included window replacements, new siding, insulation, and other repairs to the building and limestone and culverts placed on roads, trails, and parking areas as needed on all region WMAs.

## REGION VII

Region VII is located in southeast Louisiana and consists of 18 parishes: most or all of Ascension; East Baton Rouge; East Feliciana; Livingston; Orleans; Jefferson; St. Helena; Tangipahoa; Washington; St. Tammany; St. Bernard; St. James; St. John; Plaquemines; St. Charles; Lafourche; West Feliciana; and a portion of Iberville. Habitat types range from marshes and swamps to rugged loess bluff uplands. Pearl River, Joyce, Manchac, Sandy Hollow, Ben's Creek, Hutchinson Creek, Tunica Hills, Maurepas Swamp, Tangipahoa Parish School Board and Lake Ramsey WMAs are located within this region and encompass a total of 147,056 acres.

The WMAs are open for such public use as hunting, fishing, bird watching, sight seeing, boating, hiking, horseback riding, photography and berry picking, as well as many other outdoor recreational activities. Over 86,000 user days were recorded on the WMAs

during the fiscal year. An alligator season was allowed on four WMAs. Region personnel maintained WMA boundaries, buildings, equipment, roads and trails. Managed permit hunts were conducted on several WMAs.

Sandy Hollow WMA was intensely managed for mourning dove and bobwhite quail. Over 15 miles of bobwhite quail field trial courses, seven dove fields, 40 acres of food plots and 30 food strips were prepared. Controlled burning was conducted on over 2,000 acres. Approximately 115 food plots were planted and monitored on WMAs.

Region biologists and technicians worked with 225 DMAP cooperators, 15 LADT cooperators, banded over 100 mourning doves, maintained 325 wood duck boxes, responded to numerous deer and nuisance animal complaints, provided technical assistance to the public and collected hundreds of samples for Chronic Wasting Disease testing. Research on wild turkey gobbler mortality has continued. Wood duck trapping operations were conducted.

Region VII partnered with the Americorps National Civilian Community Corps to complete projects on Tunica Hills, Sandy Hollow and Pearl River WMAs and Waddill Refuge. On Tunica Hills WMA, three new hiking trails were established and one previously established trail was maintained. New signs and trail markers were placed on the trails. Members completed the construction and erection of 25 birdhouses, performed vegetation maintenance for traffic safety, completed a 100-acre prescribed burn and initiated five acres of wildlife habitat improvement on Sandy Hollow WMA. Nearly 30 acres of wildlife habitat improvement utilizing herbicide control on native and non-native species were completed on Pearl River WMA. On Waddill Refuge, members constructed a new footbridge along an established trail and moved a previously constructed footbridge to a new location. In addition, control of invasive species utilizing herbicide was completed.

## EDUCATION

Conservation education is a vital part of the Louisiana Department of Wildlife and Fisheries mission. The Education Section, within the Wildlife Division focused on three main areas: Hunter Education; Aquatic Education; and General Wildlife Education. Hunter education courses, aquatic education programs such as public fishing clinics, teacher workshops, school visits, public seminars, and educational displays are some of the methods that were used to reach the public and spread the message of wildlife conservation.

### **Hunter Education**

The department's Hunter Education Program provided training and certification in hunter education, bowhunter education and muzzleloader education as well as assisting with other related educational programs.

#### ***Administration***

Certification cards for hunter, bowhunter and muzzleloader education student and instructor courses were provided as needed for persons attending these courses. Hard copies were filed as well as computer based records for courses administered. LDWF hosted the Region IV Hunter Education Administrators Meeting in New Orleans, LA. A presentation on shooting range construction was

conducted by Rick Patterson with the National Shooting Sports Foundation and plans were made to locate a new web host for the Region IV alternative study course.

### ***Student Certification***

A total of 538 hunter education courses were provided to the general public statewide resulting in the graduation of 18,173 students. Bowhunter education courses were also provided for persons hunting on national wildlife refuges and out of state where required. A total of 63 bowhunter education student courses were taught with 1,457 people being certified. Although not mandatory in Louisiana, muzzleloader workshops are provided to the public. Two workshops were held with 35 persons attending. Certification is provided through the National Muzzleloading Rifle Association. The alternative study method for administering hunter education continues to be offered to the public. Out of the 18,173 students certified in 538 hunter education courses, 672 of these students for 43 courses accounted for alternative study method.

### ***Instructor Training***

A total of 125 new volunteer hunter education instructors were trained and provided with credentials to teach hunter education in the State of Louisiana through 15 instructor courses. In addition three instructor courses resulted in 36 persons being certified to teach bowhunter education. One statewide workshop was planned and carried out at the Camp Grant Walker in Alexandria, LA. with 105 instructors in attendance. Instructors received presentations on the 4-H shooting sports program, ATV Safety and teaching techniques.

### ***Shooting Ranges***

The hunter education program maintained five department owned shooting facilities which were used for hunter education and to provide the public with a safe place to engage in recreational target shooting. Shooting ranges staffed and operated statewide were Bodcau WMA shooting range, Woodworth shooting range, Sherburne WMA shooting range, Waddill shotgun range and the Pearl River WMA shooting range.

Both the Bodcau and Sherburne ranges are staffed by LDWF employees. The Woodworth range is operated by both staff and volunteers of the Louisiana Bayou State Muzzleloading Association. The Pearl River range continues to be managed by Southeast Louisiana Firearms Safety, Inc. through contractual agreement.

### ***Aquatic Education***

The education section of LDWF introduces people to the sport of fishing and promotes awareness of the aquatic resources in the state through both public programs and teacher training.

### ***Curriculum and Training***

Clinics: Aquatic education clinics were held statewide that resulted in 14,752 volunteer hours generated. Subjects covered in aquatic education clinics include outdoor ethics, fish identification, tackle selection and fishing techniques. Participants also are involved in actual hands on fishing.

Workbooks: Three publications "Fishing For Fun," "Let's Go Fishing" and "Finnie The Fingerling" were distributed to teachers in the school system for classroom use. A total of 6,481, 13,786

and 5,941 workbooks were used respectively. These publications promote an appreciation of aquatic resources and their habitat.

**Teacher Workshops:** Teacher workshops are conducted statewide in an effort to provide training in aquatic education that can be brought back to the classroom. The following workshops were conducted:

- *Project Aquatic Wild* - Teachers are provided with guidance and materials to conduct classroom activities to make students aware of aquatic resources and their habitat. A total of 225 teachers were trained in 13 workshops on the use of Project Aquatic Wild materials.
- *Wetshop* - Located at LDWF marine research station near Grand Isle, Louisiana. This unique setting has allowed teachers to learn about Louisiana's fragile coastal environment and the important role it plays in wetlands ecology. Nineteen teachers were trained and, through an additional grant made possible by the Louisiana Department of Natural Resources, provided with resources to bring this valuable information to the classroom, sharing training and resources with other teachers in their local areas.
- *Herpetology Workshop* - Teachers are introduced to reptiles and amphibians that call the Louisiana Wetlands home. Nine teachers participated in this year's workshop.

### ***Special Programs***

The aquatic education section conducted camps that introduce people to outdoor aquatic recreation and ethics.

**Marsh Maneuvers:** This program is conducted in conjunction with the Louisiana State University Extension Service. Four camps were held which were attended by students enrolled in 4-H. Students were given an opportunity to explore Louisiana's coastal wetlands at the LDWF Rockefeller Refuge and study the problems that plague our fragile coastal environment.

### ***Hatchery Education***

**Hatchery Education:** Educational programs were held at the Booker Fowler hatchery in an effort to demonstrate the techniques used to raise fish in an artificial environment. Tours of the hatchery were conducted for school students and the general public as well. Education materials and special presentations were made available through the visitor's center. One workshop was held to provide teachers with the skills and materials necessary to teach students hatchery education in a classroom environment.

**Native Fish in the Classroom:** This unique program allowed students to witness the miracle of fish growing from an egg to the fingerling stage in a classroom environment. Students maintain a nursery aquarium and are given paddlefish eggs from LDWF. Fingerlings raised are returned to the wild. A total of five new teachers were trained to conduct this program. Sixteen schools are now participating in the program.

**Finnie the Fingerling:** This workbook was developed to provide guidance on the inner workings of how the day to day operations of a fish hatchery are conducted. Readers are taken on a guided tour by "Finny the Fingerling" of the Booker Fowler Fish Hatchery. Visitors are provided with copies.

### **General Wildlife Education**

#### ***National Hunting & Fishing Day***

The general public is shown appreciation of its support by being invited to join LDWF in an open house atmosphere that involves hands on activities and a closer look at department sponsored programs. The Hunter Education Section provided training for the public in the safe use of shooting equipment. Three department sponsored events of this type were held statewide.

#### ***Becoming an Outdoors Woman (BOW)***

Becoming an Outdoors Women continues to be a popular program with women interested in learning more about outdoor recreational sports. Hunter education staff members conducted activities which taught the safe handling of equipment for hunting and recreational shooting. One statewide event was conducted.

#### ***Families Understanding Nature (FUN) Camp***

Families Understanding Nature provides both fun and education to a parent and youth through a weekend of staff lead outdoor activities. Family members are introduced to the safe use of firearms and other recreational shooting equipment. The hunter education staff participated in one FUN Camp for this fiscal year.

# FUR & REFUGE

## ROCKEFELLER WILDLIFE REFUGE

Rockefeller Wildlife Refuge was created in 1920 through a land donation developed by E.A. McIlhenny. He persuaded the Rockefeller Foundation to deed the area to Louisiana for preservation and protection of migratory birds. The area is intensively managed for waterfowl, and is one of the most important wildlife areas in the United States.

### Marsh Management, Restoration, and Mineral Management

Rockefeller's staff maintains over 200 miles of levees and 40 water control structures which result in conservation of approximately 76,000 refuge wetland acres, and additionally enhances water management capability of 100,000 private sector acres within the Mermentau River Basin. Objectives of maintenance and manipulation of the refuge's system of levees and water control structures vary somewhat by management unit, but generally goals are to maintain marsh health, provide conditions favorable for production of waterfowl food plants and incorporate multi-species management when possible.

During this fiscal year mineral activity was closely monitored as Exxon Mobil continued removing inactive lines in the Superior Canal Complex. Henry Production reworked several wells in the area improving production. Also in this area, Palace Operating Company completed two new wells.

In the Rockefeller Deep Lake Field, Hilcorp Energy Company continued reworking wells that showed potential. Those with no future were plugged and abandoned, and flow lines removed. A new company to our area, PetroQuest Energy, began a deep venture near the old Meridian site south of Deep Lake. The extreme depth of the target posed an engineering challenge due to high bottom hole temperatures and pressures. It was scheduled for completion October 2005.

### Habitat Enhancement/Restoration

Three marsh projects enhanced 26,777 acres during fiscal year 2004-2005. Projects included terrace construction and planting, water control structure replacement, canal dredging and drainage ditch cleaning. Eleven thousand linear feet of marsh terraces were constructed and planted with California bullwhip in Unit 4. This completed a four-year project to construct nine miles of terraces in this unit. The terraces were constructed to reduce wave action, water turbidity and promote the growth of submerged aquatic vegetation between terraces.

The Rollover Bayou Wakefield Type Weir was replaced with a nine-pipe aluminum stop-log flap-gated water control structure, which improved water salinity and water level control on 18,697 wetland acres. The project was part of a NAWCA Grant Joint Venture with Ducks Unlimited and private landowners in southwest Louisiana. An additional component of the project included dredging approximately 5.5 miles of Rollover Bayou from the northern Rockefeller Refuge boundary to the Gulf of Mexico, which improved regional hydrology and drainage of excess water from the refuge and adjacent private wetlands.

Approximately 8.6 miles of ditches were dredged within Unit 14. This action improved access and water management capabilities within the 2,400 acre management unit.

Work continued on a dedicated dredging project for the reclamation of 170 acres of brackish and salt marsh. Plans are to use a hydraulic dredge to deposit fill in each of these three sites ranging in size from 4.7 to 107 acres. Oystergrass will be planted in the salt marsh creation sites, and marsh hay cordgrass and oystergrass will be planted in brackish marsh creation sites. The newly established Rockefeller Mitigation Bank will provide reimbursement for the work.

Storm damage to Rockefeller Refuge was minimal during the year. Hurricane Ivan degraded to a tropical storm as it approached southwest Louisiana. It made landfall near Cameron Sept. 23, 2004 with tides of 3.8 NAVD88. The shoreline experienced erosion.

Rockefeller Refuge experienced below average rainfall in fiscal year 2004-2005, with nine out of 12 months receiving rainfall amounts below their seven-year averages. Total rainfall amounted to 49.35 inches last fiscal year, which is an 11.5 inch (18 percent) deficit compared to the seven-year average.

Controlled burning is conducted on Rockefeller Refuge to remove rough and litter which reduces the chances of unwanted lightning fires, sets back vegetative succession and promotes the growth of desirable wildlife food plants. Generally, one-third of the refuge is burned on a yearly basis. During fiscal year 2004-2005, 1,502 acres were burned in Units 14 and 15.

During this fiscal year permitting and renovation began on the Rockefeller Airstrip. Utilizing the National Guard's expertise, labor and equipment, improvements were made to the 3,700-foot by 60-foot area. The asphalt strip should be complete by September 2005.

### Waterfowl Program

Rockefeller and New Iberia staff conducted five waterfowl surveys on three coastal refuges, one waterfowl preserve and four Wildlife Management Areas (WMAs) which included Rockefeller Refuge, State Wildlife Refuge, Marsh Island Refuge, White Lake Preserve, Atchafalaya Delta WMA, Point-aux-Chenes WMA, Salvador WMA and Pass-a-Loutre WMA.

Fur and Refuge Division biologists completed the tenth year of a statewide mottled duck banding program during fiscal year 2004-2005. Department personnel banded 2,063 mottled ducks this year and 22,088 from 1994-2005.

### Alligator Removal and Fur Trapping

A successful nuisance alligator trapping program to remove animals from high human use areas was conducted on Rockefeller Refuge during September 2004. Eight hunters removed 320 alligators in five days. Average size was 7.23 feet with an average live length value of \$22.45 per foot.

Eight trappers harvested fur bearing animals from Rockefeller Refuge during fiscal year 2004-2005. Eight hundred two nutria, 14 muskrats, four mink, two raccoons and eight otters were harvested. Average price per nutria was \$1.68, muskrat; \$0.96, mink; \$7.00, raccoon; \$1.00 and otter; \$89.50.

#### **Watchable Wildlife Program**

Seven helicopter survey days totaling 42.3 hours were used to monitor Louisiana's nesting bald eagles. Three hundred fifty-six young were produced from 256 active nests during fiscal year 2004-2005. The number of young produced continues to increase, while the average young per active nest and average young per successful nest has remained relatively constant for the past five years. Increasing nesting pairs and stabilized production data indicate a healthy bald eagle population.

Ten brown pelican nesting colonies were active during fiscal year 2004-2005. Tropical Storm Arlene, Hurricane Danny, Hurricane Emily and an oil spill at West Breton Island impacted brown pelican production this year. Colonies east of the Mississippi River suffered mortality from the storms and oil spill. Over 4,000 young brown pelicans could have been produced from West Breton Island but only 225 survived the oil spill. High tides associated with storms washed young birds from other colonies east of the Mississippi River. Approximately 25,418 fledglings were produced, compared to 39,021 the previous year.

#### **Recreational Use**

Marsh enhancement units managed by structural means have proven popular with sports fishermen, resulting in overcrowding in many places. Damage to levees and alterations of automatic features of structures that regulate water salinities and levels has been a problem. Additionally, heavy public usage has placed a strain on boat launch and parking facilities. According to data collected in 2004-2005, it was estimated Rockefeller Refuge experienced approximately 130,000 man-days of public use. Of this, approximately 126,000 man-days were used for consumptive use and about 4,000 were used for non-consumptive activities.

#### **Estuarine Fisheries Program**

Rockefeller Refuge continued its fisheries monitoring program in conjunction with various habitat management/restoration strategies. Though the primary goal of the division is habitat management/restoration, personnel are able to strategically allow ingress and egress of organisms into the Superior Canal complex and several other management units when habitat integrity will not be compromised.

Rockefeller Refuge continued sampling in connection with the long-term program to identify and document effects of structural marsh management on marine organisms.

Rockefeller Refuge staff continued stocking Florida-strain largemouth bass to supplement populations lost due to extreme drought conditions. They also worked to improve recreational fishing on the refuge. In the spring of 2005, staff received approximately 600,000 fry from the Booker Fowler fish hatchery to be stocked into culture ponds for grow out to fingerling size. Once they reached an appropriate size, the ponds were seined, and the fingerlings were released into freshwater impoundments and

semi-impounded areas on Rockefeller Refuge (147,000 fingerlings), Lacassine NWR (101,000 fingerlings), Anacoco Lake (31,500 fingerlings), Bundick's Lake (43,000 fingerlings), Lake Fausse Pointe (39,000 fingerlings) and Lacombe Fish Hatchery (5,200 fingerlings).

#### **Technical Assistance/Outreach/Education**

Refuge personnel continued its outreach program. A booth was manned at the Cameron Parish Career Day in Grand Lake. Personnel hosted several events to educate elementary, high school and college classes in wildlife and wetlands sciences.

Refuge personnel assisted in developing the Louisiana Department of Wildlife and Fisheries' Comprehensive Wildlife Conservation Strategies.

During this fiscal year LDWF accepted the privilege of hosting the annual 4-H Marsh Maneuvers Camp at Rockefeller Refuge. This month long camp is designed to educate high school students statewide in the importance of coastal marsh erosion, restoration, conservation and ecology. It was developed several years ago by LSU Agriculture Center and has been held annually at the Lyle S. St. Amant Laboratory.

#### **Research and Publications**

Cooperative studies conducted at Rockefeller Refuge concerning wildlife and wetlands ecology during fiscal year 2004-05 include:

- Study of effects of body size and habitat on goose behavior in lesser snow and Ross' geese (LSU)
- Effects of earthen terraces on submerged aquatic vegetation, fisheries and waterbird utilization (LSU)

### **FURBEARER MANAGEMENT**

#### **Monitoring Fur Harvest**

The 2004-2005 furbearer harvest was monitored by compiling distribution and total harvest data. Each year fur buyers and dealers are required to submit reports providing information on pelts purchased by species and parish of harvest. Annual audits of all fur dealers provide a record of total pelts by species shipped from Louisiana. River otter and bobcat possession tags provide data on timing and location of all bobcat and otter harvested in the state. These tags are necessary to insure that Louisiana otter and bobcat are tagged with federal export tags (a federal requirement for out-of-country shipment).

Records available from the License Section indicate a total of 1,622 trapping licenses were sold during the 2004-2005 trapping season. Of these, 1,596 were adult residential licenses, six were adult non-residential trapping licenses and 20 were youth residential licenses. These figures show a slight increase in trapping licenses sold last season when compared to the previous season (1,432). More trapping licenses were sold during each of the past three years than since the 1998-1999 season. Part of this increase may have been a result of the Coastwide Nutria Control Program (CNCP) and significantly higher prices paid for river otter.

A total of 321,124 animals harvested (all species) was down 35,305 from the previous season's total of 356,429. The total value of the 2004-2005 fur harvest to the state's trappers was estimated at \$1,778,635.14. This was down \$297,172 from the previous season.

The nutria harvest (297,535) decreased by 35,061 from the previous season's total of 332,596. The average nutria pelt price paid to trappers during this past season was \$1.50, a decrease of \$.42 from the previous year (\$1.92). However, an additional \$4 was paid for all nutria taken during the Coastwide Nutria Control Program (CNCP).

#### **Fur and Alligator Advisory Council (FAAC)**

The FAAC continued to work during 2004-2005 towards its two major goals. The first goal of educating the public concerning the role of wildlife utilization in conservation is directly associated with the second goal of market enhancement for fur and alligator skins and products. FAAC has come to the increased realization that without education of the public to counter misleading animal rights propaganda, enhancement of markets cannot be accomplished in the long-term. The educational module paired with the educational CDs continued to be a great success. Requests for sample skins and programs have been tremendous. Staff and volunteers presented at numerous schools and libraries this fiscal year. The website carried the educational story to a much broader audience of teachers and students. The success of our education program will likely determine the future of markets.

This fiscal year FAAC continued to concentrate efforts on the U.S. alligator market. The Retailer Education Program was well received by retailers with requests for more educational programs for their sales staff. This program allows information to be distributed about the sustainable use of alligators, the "marsh to market story" and the difference between alligator and caiman leather.

FAAC also concentrated on solving problems associated with alligators and crocodilians in general through CITES and USFWS programs and regulations. Progress continues to be steady.

FAAC has struggled to find new strong and stable markets for Louisiana fur. The international fur market continues to be very dynamic and many internal and external factors affecting buying trends and markets are still present. Mainland China still holds the brightest future for new and expanded markets and bought more Louisiana products this year. China is catching up with its knowledge base, and dealers are eager to learn about Louisiana furs. The FAAC attended fur shows in mainland China and Hong Kong this fiscal year. FAAC has followed a marketing plan of working in several countries that are gateways to China.

#### **Research**

The Fur and Marsh Management Section continued research through grants and contracts during this period. In 2004-2005 the section administered several continuing contracts concerning vegetative damage caused by nutria and control techniques. A three-year grant was awarded in fiscal year 2002-2003 from the Habitat Section, National Marine Fisheries Service and NOAA. Department contractors included LSU Coastal Studies Institute, LSU Agriculture Center, Wildlife Services, USDA and a state private research contractor. This research included studies to (1) obtain a better understanding of vegetative damage and why some damaged areas recover and other areas remain damaged or even convert to open water, (2) select plant species and techniques to be used for vegetative restoration of wetlands damaged by nutria, (3) determine why nutria populations in the Chenier Plain (south-

western Louisiana) have declined over the last 20 years but populations in the Deltaic Plain (southeastern Louisiana) have remained large enough to cause serious damage in some areas, and (4) evaluate an alternative control method for nutria, using a rodenticide, if the CNCP does not succeed in reduced vegetative damage.

The department conducted a Bobcat, Fox and Coyote Hunter Survey by taking a random sample of Louisiana big game license hunters from the 2003-2004 season. There is little information as to the numbers of bobcats within the state of Louisiana and so harvest data are needed to best manage the season and monitor trends through time.

The department continued fisheries research coupled with the impacts of beneficial dredge disposal on the habitat with LSU on the Atchafalaya Delta WMA. Floating Marsh Restoration research continued with LSU on selected freshwater marsh locations along the coast.

This section also monitors marsh conditions on the coastal WMAs and refuges. Marsh conditions are surveyed both on the ground and through aerial surveys. These surveys are indicators of general marsh health, abundance of aquatic vegetation for waterfowl, abundance of furbearers and many other important components of these ecosystems.

Fur and Marsh Management personnel also collect data on wading birds and shorebirds that nest and feed on these areas and alligator nest densities, and participate in intensive coast wide waterfowl surveys.

#### **Coastwide Nutria Control Program (CNCP)**

This program is funded by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). The objective is to increase the harvest of nutria in order to reduce damage to vegetation. A total of 297,535 nutria tails, worth \$1,190,140 in incentive payments, were collected from 310 participants. Seventy-nine participants (25 percent) turned in less than 200 tails, 74 participants (24 percent) turned in between 200 and 499 tails, 46 participants (15 percent) turned in between 500 and 799 tails and 111 participants (36 percent) turned in 800 or more tails. There were 23 parishes represented in the program with harvests ranging from 10 to 81,135 nutria per parish. Approximately 80 percent of the harvest came from the southeast portion of Louisiana. The method of take for each nutria was identified as: 114,668 nutria (38 percent) trapped, 159,810 nutria (54 percent) taken with a rifle, and 23,057 nutria (8 percent) taken with a shotgun. February was the most active month for harvesting nutria (99,583 tails) while November (5,276 tails) was the least active month (see CNCP 2005 Report, CWPPRA Project LA-03b).

During fiscal year 2004-2005 two articles on the Coastwide Nutria Control Program were published, one in the ESRI magazine, *ARC User* October-December 2004 (an Arc-View/GIS based publication) "Safeguarding Coastal Wetlands Through Exotic Species Control" and another in *Currents* Volume 21 - Number 2 - 2005, a Marine Educational Journal, "Louisiana's Coastal Wetland Loss: A Successful Invasive Species Control Program?".

### **Vegetative Damage Caused By Nutria**

As a monitoring requirement of the Coastwide Nutria Control Program, a coastwide aerial survey was conducted in the spring of 2005 covering the coastal parishes of Louisiana. The total number of sites visited in 2005 was 105, of which 19 were new sites while 86 were previously classified as damaged in the 2004 survey. Neither the one damaged site that had converted to open water in 2004 nor the sites that recovered in 2004 were visited during the 2005 survey. Of the 19 new sites, 14 were identified as muskrat damage and five were identified as nutria damage. Of the 86 sites previously identified as having damage, 47 were identified as still having visible nutria herbivory impacts, 29 were classified as recovered nutria damage, two had been converted to open water, eight were identified as muskrat damage and five sites were identified as being recovered muskrat damage. These sites are extrapolated to determine damage coastwide.

A total of 14,260 acres (extrapolated to be 53,475 acres coastwide) were impacted by nutria feeding activity along transects. This is a reduction from the 16,906 acres (extrapolated 63,397 acres coastwide) impacted by nutria in 2004. Of the 49 sites currently showing impact, Terrebonne Parish contained the largest number of damaged sites with 18 sites (37 percent) encompassing a damaged area of 4,541 acres (31 percent). This is also a decrease from the 27 sites and 7,679 acres in 2004, indicating that a number of sites have recovered in Terrebonne Parish. During the 2005 survey, Lafourche Parish accounted for only two sites (4 percent) and 127 acres (2 percent) of damaged marsh, compared to five sites (7 percent) and 610 (3 percent) acres in 2004. Seven sites (14 percent) and 1,383 acres (10 percent) were located in Jefferson Parish. Plaquemines Parish accounted for seven sites (14 percent) and 1,850 acres (13 percent). St. Bernard Parish had four sites (8 percent) with 1,882 acres (6 percent) impacted. St. Charles Parish, for the third straight year, had a large increase in the amount of damage, presently amounting to 4,690 acres (33 percent) on six damaged sites (12 percent). This acreage increased from 2,564 acres on nine damaged sites in 2004. Although the number of sites in St. Charles Parish decreased, the total number of acres increased, and is partially due to the fact that two sites grew in acreage and merged into one site. St. Charles Parish had the highest number of damaged acres of the parishes surveyed. Nutria vegetation damage was observed within Iberia Parish for the first time during the 2005 survey. It had one site of 158 acres. The final two damaged sites were located within Vermillion Parish encompassing 389 acres. In 2005, Terrebonne, Jefferson, St. Charles and Plaquemines were the parishes most affected by nutria herbivory.

For the three years prior to implementation of CNCP incentive payments, the coastwide nutria harvest was 20,110 (1999-2000), 29,544 (2000-2001) and 24,683 (2001-2002); the coastwide estimate of nutria herbivory damage was 97,271 acres (2000), 83,021 acres (2001) and 79,444 acres (2002).

For the first three years of CNCP incentive payment implementation, the coastwide nutria harvest was 308,160 (2002-2003), 332,396 (2002-2003) and 297,535 (2004-2005); the coastwide estimate of nutria herbivory damage was 82,080, (2003), 63,398 (2004) and 53,475 (2005).

The CNCP has served to drastically increase the nutria harvest in coastal Louisiana to about 300,000 animals per years. Thus far, this increase appears to have resulted in fewer nutria-damaged acres in coastal Louisiana.

### **MARSH MANAGEMENT**

Division staff continued work on several Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) projects and other restoration projects during this period. Staff worked with parish, state and federal government coordinating these projects through planning, meetings, site visits, permitting and project reviews.

Department staff continued work on the Morganza to Gulf Hurricane Protection Levee, especially the reaches impacting the coastal refuges and WMAs. Staff worked with USDA/NRCS on tree planting projects on several coastal refuges and WMAs.

Staff also worked on four other CWPPRA projects involving coastal wildlife management areas. The concept of the Delta Wide Crevasse Project on Pass-a-Loutre WMA dates back to the early 1990s. Freshwater diversions were created earlier by innovative work on the part of division staff. Working with oil and gas production companies the department created cuts in the ends of location canals allowing river water to flow into adjacent bays, where small deltas were quickly formed. This concept was adopted as a CWPPRA project and many other such cuts were made throughout much of the delta. During the period staff worked with the Louisiana Department of Natural Resources (LDNR) and the National Marine Fisheries Service (NMFS) to select which old cuts should be cleaned out, and where new cuts could be made. This selection process required a number of meetings, ground surveys and aerial flights with photography. The construction of the Delta Wide Crevasse Project began in the spring of 2004 and was completed in the late summer of 2004. Staff also worked with DNR on the CWPPRA Small Dredge Project. This LDNR-sponsored project in the area of Sawdust Bend on Pass-a-Loutre WMA was initiated in June 2004 with construction of the containment dikes. The project was interrupted due to impacts from Hurricane Ivan in the fall of 2004. The project was resumed in the summer of 2005 and completion was expected by late summer 2005. This project is projected to build approximately 55 acres of emergent marsh.

Division staff attended meetings concerning design, modeling and permitting for Castille Pass, Atchafalaya Delta WMA, Raccoon Island Breakwaters and Isle Dernieres Barrier Islands Refuge, which are CWPPRA projects. These projects continued with design, permit application and approval process.

Division staff continued to work closely with the Corps of Engineers on annual maintenance dredging of the Atchafalaya River through the Atchafalaya Delta WMA. Work continued on new potential dredge deposition sites on the lower Atchafalaya River. This required planning and review of specifications during the fall and monitoring of activities during the summer, which included shorebird surveys. The COE started in December 2004 dredging the Atchafalaya Bar Reach (Eugene Island to Offshore) and finished in May of 2005. The Horseshoe Reach was started in June 2005 and was expected to be completed in the fall of 2005.

Planning is continuing on the dredging of South Pass on the Pass-a-Loutre WMA and will involve beneficial use of material to fill in the northern section of the freshwater impoundment. Staff also worked with the Corps of Engineers on new dredge disposal sites in the area north of "Sawdust Bend" on the Pass-a-Loutre WMA.

LDWF was awarded a grant from the North American Wetlands Conservation Act to construct a Water Management Unit on the Pointe-aux-Chenes WMA. The 5,000 acre unit is located in the center of the WMA and will be managed to enhance a deteriorated salt marsh that is now 60 percent open water. In 1956 it was 99 percent marsh. The area will be managed for marine organisms and waterfowl by regulating water levels and salinity to reduce turbidity, increase aquatics and improve emergent marsh diversity. A pre-bid conference was held in August 2004 and in the late fall the contract was awarded to Low Land Construction. Work began on the water management unit in February 2005. This project completion was expected in December 2005. Ducks Unlimited is acting as the lead organization for implementation of the grant including grant application, partnering, engineering and overseeing the construction.

Staff worked on design, engineering, construction, and planting of approximately 14,000 linear feet of terraces inside the water management unit to be constructed on Pointe-aux-Chenes WMA. A grant from the Gulf of Mexico Foundation funded the construction and planting of the approximately 5,000 linear feet of terraces and the department constructed approximately 9,000 linear feet of terraces. These terraces will help to reduce wave energy and turbidity in the unit and encourage the growth of aquatics.

Staff also assisted other division personnel with seismic activity monitoring and planning and monitoring of drilling rig movement and mitigation on Atchafalaya Delta WMA.

#### **Coastal Impact Assistance Program (CIAP)**

Work continued on the DNR Interagency Agreement No. 2513-02-01 which provides funding for the Coastal Impact Assistance Program (CIAP). This agreement included seven tasks. Three of the tasks were non-construction projects: brown pelican monitoring; eagle monitoring; and a Louisiana Coastal Workshop for educators. Four of the tasks were construction projects: Campground Improvement, Atchafalaya Delta WMA (\$59,323); Oyster Lake Terracing, Marsh Island Refuge (\$178,802); Lake Tom North Shoreline Stabilization, Marsh Island Refuge (\$413,875); and Grand Bayou Unit Boat Launch, Pointe-aux-Chenes WMA (\$684,800). Two monitoring projects approved included two years of eagle and pelican surveys (\$133,000). The project involving a Louisiana Coastal Ecology Workshop for educators was funded for two years (\$74,000).

During fiscal year 2004-2005, New Iberia Fur and Refuge staff continued working on the engineering and design of the one remaining construction project. This project is the Grand Bayou Unit Boat Launch at Pointe-aux-Chenes WMA. The low bid for this project was from Low Land Construction for \$899,970. CIAP funds will cover \$684,800 and LDWF will contribute the remaining balance of \$215,170. The construction began in January of 2004 and the project was completed with a final inspection on July 26, 2004. The total number of construction days was 178

days. The coastwide brown pelican survey for 2004-2005 was completed in July of 2004. The DNR Interagency Agreement for CIAP was amended to extend the agreement through November 2006. The new DNR Interagency Agreement No. 2513-05-02 was approved in June 2005. The extension will allow The Louisiana Coastal Ecosystem - A Workshop for Teachers to continue with the remaining funds in the budget.

### **COASTAL STEWARDSHIP OPERATIONS**

#### **General**

The 2004 nine-day teal season (seven days less than last year) harvest-success on the coastal WMAs this year was almost identical to the 2003 season, with hunters harvesting an average of 1.7 birds per hunter effort. However, the daily average hunter effort and harvest has steadily declined over the last five years.

The 2004-2005 regular waterfowl season was a total of 60 days (same as last year) and hunter interviews indicated that the total number of ducks harvested from the coastal WMAs was down by 40 percent, and the total hunter effort was down by 30 percent from last season. Overall, the harvest of waterfowl during the regular season has decreased approximately 55 percent over the last five years.

Revised harvest agreements between the department and alligator hunters/fur trappers of the coastal WMAs and St. Tammany Refuge were created for the 2004-2005 season. As a result, the trappers were successful in harvesting 234 alligators from the Atchafalaya Delta WMA, 444 from Pass-a-Loutre WMA, 225 from Pointe-aux-Chenes WMA, 504 from Salvador/Timken WMAs, eight from Lake Bouef WMA and 10 from St. Tammany Refuge. Following the 04-05 trapping season, four of the coastal trappers/hunters were terminated from the program due to their lack of participation in the Coastwide Nutria Control Program.

In an effort to improve safety and efficiency, Coastal Operations field staff scheduling was altered to minimize the number of times that employees work alone at remote field facilities. All field staff members were paired and assigned to an 8/6 work schedule. To compensate for a shortage of employees at Marsh Island Refuge, Daniel Gary, former State Wildlife Refuge technician, was reassigned to Marsh Island, and Marsh Island staff assumed the task of maintaining State Wildlife as part of their routine obligations. Additionally, personnel changes occurred during fiscal year 2004-2005.

During fiscal year 2004-2005, only one major storm, Hurricane Ivan, caused damage to the coastal WMA/refuge system. Hurricane Ivan struck the coast of Alabama on September 16, 2004 causing some minor damage at the Pass-a-Loutre WMA. The area experienced eight hours of sustained winds in excess of 50 mph and gusts up to 80 mph. The headquarters facility sustained little structural damage, but the tent-campsites and marsh were heavily impacted.

With the assistance from the deer study leader, Scott Durham, and the Deer Management Assistance Program (DMAP) study leader, Emile LeBlanc, browse surveys were initiated and spotlight counts were reinitiated in order to establish an index for monitoring the deer herd for better management on the Atchafalaya Delta,

Pass-a-Loutre, Pointe-aux-Chenes and Salvador/Timken WMAs. The information obtained from the surveys, in conjunction with harvest data, will expand our basis for harvest and management goals.

#### **Atchafalaya Delta Wildlife Management Area**

To improve accommodations for waterfowl hunters, the Wax Lake Outlet Delta tent-campground was leveled and enlarged to increase the available camping space. In addition, the grounds were disked and planted with Bermuda grass.

Departmental staff continued to participate in the implementation and monitoring of the US Army Corp of Engineers (COE) Dredge Material Management Program to beneficially use dredge material to create wetlands within the Atchafalaya Bay. The COE and LDWF held multiple field excursions and meetings to design and ground truth locations for future disposal sites on the west side of the Main Delta. The disposal sites will be available for use during the fiscal year 2005-2006 dredging cycle.

Coastal Operations staff provided logistical and technical support for multiple research projects that evaluated various wildlife and fishery aspects of the Atchafalaya Delta WMA. Atchafalaya Delta and New Iberia staff provided logistical accommodations for LSU entomology professor, Dr. Lane Foil's research to determine if insect vectors of the bluetongue virus are present at the WMA. Area staff also assisted with the collection of river shrimp (*Macrobrachium ohione*) and plankton samples for UL Lafayette biology professor, Dr. Ray Bauer, to assess the seasonal variation in the population structure and migration of this shrimp, which inhabits the Atchafalaya River. Additionally, Dr. Bruce Thompson and Gary Peterson of the LSU Coastal Fisheries Institute continued their study of sport fishery use of marsh islands created via the beneficial use of dredge material. LDWF assisted this effort by providing lodging and transportation when required.

In addition to supporting research, the Coastal Operations Section also assisted the National Oceanic and Atmospheric Administration (NOAA) with multiple Atchafalaya Delta field reconnaissances. The department provided logistical support for the repair of the Eugene Island hydrological station and provided airboat accommodations to ground truth several satellite imagery markers to confirm the accuracy of satellite imagery surveys, which are being used to identify vegetative assemblies. Additionally, Coastal Operations staff assisted a NOAA contractor with the site selection of a storm-hardened meteorological data collection station on the Main Delta. Pending funding from NOAA, the Atchafalaya Delta site may be included among approximately 20 monitoring sites along the Louisiana, Mississippi, Alabama and Florida Gulf Coast.

Permits for all available mooring locations were issued for the 2004-2005 hunting seasons. A total of 72 houseboat-mooring permits were issued at the three mooring locations at the Main and Wax Lake Outlet Deltas.

Based on self-clearing permit data, 463 archery hunter efforts were expended in the harvest of 60 deer (41 bucks and 19 does), yielding a kill per effort of one deer per 7.7 efforts. This is a 60 percent reduction in hunter effort and approximately a 30 percent reduction in harvest since the initiation of the self-clearing permit

system. Additionally, during the month of December, two youth lottery deer hunts were held at Big Island on the Main Delta. A total of 27 youths participated in the hunts and a total of five deer (one buck and four does) were harvested.

During the teal season at the Atchafalaya Delta, some 400 hunter-efforts resulted in the harvest of 750 birds, for an average of 1.9 birds per effort. This is a slight increase in kill per effort from the 2003 season. During the regular waterfowl season, some 6,865 ducks were harvested via 3,000 hunter efforts, for an average of 2.3 birds per effort. This was a 30 percent increase in harvest compared to last year. The Atchafalaya Delta WMA was the only WMA under the auspices of Fur and Refuge Division that had an increase in the harvest rate (i.e., kill per effort) for the 2004-2005 season.

New Iberia and area staff conducted periodic shorebird surveys as part of the Audubon 2005 Louisiana Coast and Islands Breeding Plover Survey and the US Fish and Wildlife Service 2005 Lower Mississippi Valley Joint Venture Shorebird Monitoring Program. Many species of shorebirds were observed during the surveys including semi-palmated, black-bellied, and Wilson's plovers.

Two hundred and thirty four alligators having an average length of 7.0 feet were harvested from the area during the 2004 alligator season. The department received \$8,865.94 as its share of the revenue from the sale of these animals.

#### **Isle Dernieres Barrier Island Refuge**

The Natural Heritage Program conducted two shorebird surveys on the island.

Department personnel assisted the public and Terrebonne officials with the "Beach Sweep" program. This program was a collection of volunteers that collected debris and trash from the islands.

Dr. Gary Lafleur with Nicholls State University was granted a conditional-use permit to conduct monitoring and class trips on the islands.

#### **Lake Boeuf Wildlife Management Area**

According to self-clearing permit data, 23 attempts were made to harvest deer with no success.

Six food plots and road improvements were made this year in anticipation of this year's youth lottery deer hunters. The youth lottery deer hunt had 12 youth participants. None of the participants harvested a deer.

#### **Marsh Island Refuge**

A 3-D seismic survey was initiated at the Marsh Island Refuge during fiscal year 2004-2005. With the aid of Tom Hargis, environmental monitor for the Russell Sage Foundation, and Coastal Environments Inc., monitor for the survey company, LDWF staff carefully monitored the seismic effort to ensure that the PGS/Summit Energy survey was implemented in accordance with departmental regulations.

As a contribution to the department, Summit Energy initiated the Marsh Island Elevation/Base Contour Project to provide the department with elevation and contour data for the island. Mr. Mike Mayeux of M.P. Mayeux Surveying & Boundary

Consulting, LLC was contracted by Summit to perform the elevation/contour study and install four additional vertical control monuments.

The Big Impoundment Levee Repair Project was initiated in August 2004 and completed in June 2005. Dean Equipment Inc. of Harvey, La. was contracted to repair the breached levee, install a three-barrel, variable-crested water control structure between the two subunits of the Big Impoundment, cap the tops and/or wing-walls of eight water control structures with limestone and install man-sized riprap at the Joe Aucoin Weir to restore function to the structure. To assist with these repairs, the department provided logistical support for several pre-construction field excursions and dredged the Belly Dam Canal to improve access to the Northeast Unit.

Coastal Operation staff hosted an interagency field reconnaissance in April 2005 with Dr. Felipe Chaves-Ramires of the Platte River Whooping Crane Habitat Trust to survey portions of Marsh Island to determine and discuss habitat suitability for the reintroduction of the endangered whooping crane. LSU hopes to initiate further habitat assessment and, if all goes well, whooping cranes may be reintroduced within the next few years.

Coastal Estuary Services LLC (CES), a subsidiary of Shaw Coastal, initiated the implementation of the Marsh Island segment of the Coastwide Reference Monitoring System Project (CRMS). The project, which is funded by Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA), was developed to assess the cumulative effects of all the coastal restoration projects by establishing a network of reference sites across Louisiana's coast.

Controlled burning of nearly 9,800 acres of the island was conducted to encourage the germination of seedlings, especially three-cornered grass (*Scirpus robustus/olneyi*), which are critical forage for the thousands of geese that utilize the area each winter. Approximately 40,000-60,000 snow geese were observed foraging in the burned areas during LDWF's 2004 aerial surveys.

The two shorebird-nesting islands in Bayou Platte were mowed and sprayed with herbicide in March 2005 in preparation for the nesting season. The removal of vegetation from the islands exposes the shell/limestone surface, which is vital for successful nesting. A variety of species were observed utilizing the island, including black-necked stilts (*Himantopus mexicanus*), black skimmers (*Rynchops niger*), gull-billed terns (*Sterna nilotica*), least terns (*Sterna antillarum*), laughing gulls (*Larus atricilla*), and killdeer (*Charadrius vociferus*).

In addition to periodic bird monitoring, New Iberia staff conducted a survey of the island as part of the Audubon 2005 Louisiana Coast and Islands Breeding Plover Survey. No threatened or endangered species were observed during the assessment.

Approximately 150 tree seedlings (crabapple, persimmon, mayhaw, saw tooth and waster oaks) were donated and planted at Marsh Island as part of the Louisiana Department of Agriculture and Forestry (LDAF) Vegetative Planting Program to improve wildlife habitat. The 150 seedlings will serve as a test plot to

determine if these species are capable of surviving in the local environmental conditions.

A conditional permit was issued to Robert Danka of the United States Department of Agriculture (USDA) Honey Bee Breeding, Genetics and Physiology Laboratory to conduct honey bee research at Marsh Island. During fiscal year 2004-2005, Dr. Danka initiated his research by deploying bait stations and bee colonies to determine if any wild bees inhabit the area.

The living quarters at the Marsh Island headquarters facility was in dire shape as a result of Hurricane Lili. Consequently, Fur and Refuge staff initiated the restoration of the building, which included sub-floor repairs, replacement of rotten structural components and installation of new flooring.

To improve public safety, New Iberia and area staff coordinated and assisted with the removal of six nuisance alligators that were frequenting three weirs (the Gordy, Belly and Big Dams) which are commonly used by the public. No commercial alligator harvest was conducted on the refuge this year.

#### **Pass-a-Loutre Wildlife Management Area**

This year has been an extremely active year at Pass-a-Loutre WMA. The combination of camp renovations, improvements in equipment, marsh creation projects, oil spills, improved biological monitoring, the effects of Hurricane Ivan and decreased manpower has pushed the limits of productivity on the area staff.

Several renovations were performed on the camp this year. A new metal roof was installed on the camp, workshop, pump shed and the Air Quality Station. The gutters were replaced and re-hung to capture the maximum amount of water off the roof to supply the cistern. The carpentry crew installed new flooring throughout the camp, remodeled all the bathrooms, installed new cabinets and replumbed the gas line. Ten thousand dollars in electrical upgrade and improvement work was performed on all structures. A new central heat and air conditioner unit was installed on the visitor's side of the camp. In addition, two new Quonset Huts were purchased utilizing Hurricane Lili Funds. They are to replace the current huts used as the boat and tractor sheds. We are awaiting assistance from the carpentry crew to install them.

All five of the tent camping areas were maintained, access routes dredged, self-clearing permit stations constructed and picnic tables built on each site this year to enhance the utilization of the areas. A sixth camping area was also established to ease the pressure currently experienced on other sites. This sixth camping area is located just east of Loomis Pass.

Water hyacinth was a severe problem this year. Most of the ponds were completely covered and shaded out many other more favorable species such as duck potato and a variety of aquatic species. We were working with the aquatic weed control section to alleviate the problem when Hurricane Ivan struck. With the passage of Hurricane Ivan the hyacinth was effectively removed from the area. In the wake of the storm, most trees were broken, floatons were removed, aquatics removed, and emergent vegetation was severely impacted.

While the camp and facilities experienced minimal wind damage, some wildlife populations were severely impacted. Thousands of nutria, gar, largemouth bass and a few alligators were found dead on the area. Most of the rookeries and roosting area were destroyed and several pelicans, gulls and other birds were found emaciated. Whitetail deer, rabbits, raccoons and feral hogs appeared to weather the storm relatively well.

Hurricane Ivan also sunk a dredge barge associated with the DNR small dredge project. The Dedicated Dredge Project was a project to construct approximately 55 acres of emergent marsh in Sawdust Bend using dredge materials from Dennis, Johnson and Loomis Passes. In the process of recovering equipment from the storm, Coastal Dredging damaged two acres of marsh that will have to be mitigated back in the future. This is an ongoing project from last year and will continue into next year due to the storm's set back.

The DNR Delta-wide Crevasse project was initiated and completed this year. The purpose of the project was to create small delta displays of new marsh on the WMA by cutting holes through natural levees into open areas of water. The project built four new crevasses and cleaned out one existing crevasse.

According to self-clearing permits, 59 deer hunter efforts harvested 14 deer this year. This yields a success rate of one deer for every four hunting attempts.

Several biological monitoring programs were initiated or reinitiated this year. The Louisiana Coast and Islands Breeding Plover Survey organized by the National Audubon Society, identified semi-palmated and snowy plover nests on the WMA and evidence that Wilson's plovers are also utilizing the area. This survey also revealed that our feral hog population has learned of the nesting areas and are moving to this area during nesting season, decimating bird nests.

Inland Fisheries continued their sampling of freshwater fishes on the Mississippi River Delta. Their sampling has revealed that Mississippi River Delta largemouth bass have a higher average mass than largemouth bass populations of other marsh ecosystems. They have also identified that introduced Asian carp have moved into the area.

Area staff helped the Audubon Society's Marine Mammal Rescue Team collect DNA and necessary data from a dead whale found on the bank of Southwest Pass. The whale was identified to be a Bryde's whale. According to the Audubon Society this was the first confirmed sighting of a Bryde's whale in Louisiana waters since 1990, and the first in the Mississippi River Delta since 1982.

During the 2004 teal season, waterfowl bag check data showed that an estimated 95 hunters harvested 300 teal for a 3.2 teal per hunter effort success rate. This success rate was the highest among all measured Fur and Refuge properties. This success rate is significantly higher than the 2003 season, however total hunter efforts and total ducks harvested fell significantly. During the 04-05 regular waterfowl season an estimated 2,360 hunters harvested 7,290 ducks for a success rate of 3.1 ducks per hunter effort. This success rate was the highest among all measured Fur and

Refuge properties, however hunter efforts fell 70 percent and total harvest fell 68 percent from the 2003-2004 season.

### **Pointe-aux-Chenes Wildlife Management Area**

Lowland construction completed their contracted repairs to the Montegut Management Levee. In an agreement with DNR, a hole was left in the levee to let another contractor enter the impoundment to lay rock on the levee to strengthen it.

Lowland Construction received the bid and began constructing the Pointe-aux-Chenes/Ducks Unlimited water management unit. A groundbreaking ceremony was held on the management area to commemorate the occasion.

Area staff constructed 6.5 terraces within the Pointe-aux-Chenes management unit. These are the first of many planned and are located in the northern third of the unit. LSU is planting the terraces with *Spartina alterniflora*. LSU has also set up monitoring stations within the unit to record marsh accretion, loss or other changes.

Area staff began required pre-project monitoring of the unit. This monitoring includes weekly salinity monitoring and biweekly fish sampling via six foot trawl sets. Staff is working with the Fisheries Division in Bourg to classify and record the sample results.

A small dredge marsh creation project was completed just east of Grand Bayou. This project was a mitigation project paid for by Discovery Pipeline which created marsh by filling in a dead end canal with dredge materials from Grand Bayou. Black Lake Marsh Inc. planted the project.

A two-acre bottomland hardwood mitigation planting was performed on Point Farm. The project fulfilled Tidewater Levee and Conservation District and Tellus Oil's mitigation requirements. The two-acre mitigation required planting of approximately 2,000 trees of various species which the department specified.

LDWF drafted a letter of interest to purchase the Karlog Property. This approximately 100-acre tract has property inside the Montegut protection levee and management unit. Purchasing this property would allow the department to construct a boat launch into the unit and build a new tent camping area. Currently the public has no access into the Montegut impoundment other than pulling a boat over the management levee.

PAC staff attended many interagency meetings concerning the Morganza to the Gulf Hurricane Protection Levee Project. LDWF was successful in altering the alignment of the levee to incorporate the Montegut management unit and a large portion of Point Farm. We also minimized the number of borrow sites that were to be dug within the new Pointe-aux-Chenes management unit.

Entergy began evaluating a project to remove an abandoned power line in the Sulfur Mine/Bully Camp area. LDWF personnel observed that six of the 10 power poles that were to be removed contained osprey nests. At the department's request, Entergy has agreed to leave those poles for osprey nesting habitat.

PAC staff managed the Grand Bayou management as prescribed by the management plan. No management is being performed on the Montegut unit due to the hole in the levee. Firebreaks were maintained on Pointe Farm for deer and rabbit hunters.

According to self-clearing permit data, 62 deer hunting attempts harvested only one deer. The youth lottery deer hunt had 18 participants which harvested two deer.

During the 2004 teal season, waterfowl bag check data revealed that an estimated 980 hunters harvested 1,565 teal for a success rate of 1.6 teal per hunter. This is a significant decline in hunter participation and total harvest from the previous year. During the 2004-2005 regular waterfowl season, an estimated 5,900 hunters harvested 10,980 ducks for a success rate of 1.9 ducks per hunter effort. This data reflects that hunter effort is down 22 percent while harvest fell 37 percent compared to last year.

#### **Salvador/Timken Wildlife Management Areas**

A "Coastal Awareness" meeting was held at the headquarters of Salvador/Timken WMAs. In attendance were representatives from NASA, EPA, USDA, USCOE, LDWF, LDNR, Social Services, and other members from the U.S. Treasury Department and Department of Interior. Deputy Secretary Randy Hanchey of the LDNR, Col. Rowan of the USACOE, Assistant Secretary Phil Bowman and Edmond Mouton of LDWF gave presentations about related issues to coastal wetlands loss and restoration.

Pier 90 changed management. The prior land manager was replaced by Courtney Mongrue, who is in the process of making improvements to the facility. The landowner, Joe Marcello, has agreed to allow the department to continue using Pier 90 as long as we continue to maintain the grounds and do not "increase our needs."

Dean Equipment completed a USCOE project to lower the elevation of the cuts in gabion structures along Lake Cataouatche 3.5 feet. This will allow more freshwater to escape the Davis Pond area quicker, thus allowing the project to operate more efficiently.

Since the introduction of the Davis Pond Freshwater Diversion Project, hyacinth have become a major problem each year. LDWF staff has worked on an agreement with the aquatic weed division to get an earlier and more continued control on the problem in the future.

This deer season 196 deer hunting efforts were made which resulted in 17 deer harvested. This is a success rate of one deer per 11.5 efforts.

During the 2004 teal season, an estimated 230 hunters harvested 320 teal for a success rate of 1.4 teal per hunter effort. This hunter effort and total harvest is significantly lower than the 2003 season.

During the 2004-2005 regular waterfowl season, an estimated 1,795 hunters harvested an estimated 2,500 ducks for a success rate of 1.4 ducks per hunter effort. This data illustrates a 60 percent decrease in hunter effort and a 73 percent decrease in total harvest as compared to the 2003-2004 season.

#### **State Wildlife Refuge**

The department provided logistical arrangements for an inter-agency field reconnaissance to survey the status of the Natural

Resources Conservation Service's (NRCS) Lake Portage Land Bridge CWPPRA Project. The inspection revealed that the project site was rapidly re-vegetating and enhancing wetlands.

Controlled burning of nearly 5,350 acres was conducted at the refuge to encourage the germination of seedlings, especially three-cornered grass (*Scirpus robustus/olneyi*), which are critical forage for the thousands of geese that utilize the area each winter. Approximately 75,000-95,000 snow geese were observed foraging in the burned areas during LDWF's 2004 aerial surveys.

To improve public safety, New Iberia and area staff coordinated and assisted with the removal of four nuisance alligators that were frequenting the North Lake Weir. No commercial alligator harvest was conducted on the refuge this year.

#### **MINERALS MANAGEMENT**

The mineral program is responsible for ensuring that mineral activities on all LDWF properties are compatible with the environment and that WMA/refuge goals and objectives are met. Mineral program staff reviewed and evaluated 89 well locations and pipeline projects, and issued/renewed nine rights of way and surface leases during 2004-2005. All of these projects are reviewed and coordinated with field personnel to ensure that they are compatible with department management area programs. The mineral program generated fees in excess of \$15 million, which included mineral royalties, rights of way, surface leases and seismic fees. Additionally the mineral program staff obtained 14 Corps of Engineers permits for department management projects and issued 116 airboat/marshbuggy permits for various activities on department properties. The mineral program also coordinated with the Office of Conservation for the removal of numerous abandoned oil and gas facilities on management areas and refuges. The program also assisted in legislation (Act 8) that amended existing seismic fees, which will generate additional annual revenues for the department.

A new Memorandum Of Understanding (MOU) was signed and implemented during 2004-2005 between LDWF and the Coastal Management Section of the Department of Natural Resources. The MOU requires that applicants for a coastal use permit obtain a letter of clearance from LDWF if the project is located on a management area or refuge. The letter of clearance must be submitted as part of the coastal use permit application before a coastal use permit will be issued. Additionally, a Wetland Value Assessment (WVA) is conducted by the department for each project that impacts vegetated wetlands and is used as the basis for determining mitigation requirements. The new MOU should streamline the permit process while ensuring that proper environmental oversight is achieved.

#### **HABITAT**

The objective of the Habitat section is to gather and compile data on fish and wildlife resources, determine the requirements for conserving the resources, and provide information and technical assistance to governmental agencies, non-governmental entities and the public. Data are also gathered on the potential impacts of human activities on the resources. These data and recommendations are provided to planners and decision-makers in advance of execution

of projects in order to avoid, reduce or compensate for any environmental damage. The Habitat section is divided into the five subunits.

### **Louisiana Natural Heritage Program (LNHP)**

The Natural Heritage Program gathers, compiles and disseminates information on unique, rare, threatened and endangered species, and unique, rare and critical habitat on the state, federal and international level.

LNHP staff reviewed over 2,000 project proposals and wrote over 600 letters in response to proposed public and private projects, assessing possible impacts on rare, threatened and endangered species and exemplary natural communities. More than 260 field days were spent conducting surveys on individual species and natural communities for updating the computerized database. A total of 432 new or updated Element Occurrence Records (EORs) were entered into the database for non-game, rare, threatened and endangered species showing the location and status of species of special concern in Louisiana.

The LNHP administers federal aid grants for species of special concern through the Endangered Species Act, Section 6 program and participates in the State Wildlife Grants Program (formerly CARA). Section 6 projects included a study of the ringed sawback turtle, gopher tortoise, gulf sturgeon, bear/human conflicts and a black bear repatriation project, snowy plover surveys and coastal bear hair traps. Projects funded under the State Wildlife Grants Program include breeding bird surveys, marine mammal and sea turtle stranding, Red-cockaded Woodpecker Safe Harbor Program, wading bird inventories, Natural Areas Registry Program, shorebird surveys and a study of native bats. The staff participated in Christmas Bird Counts, Breeding Bird Surveys throughout the state and statewide Louisiana Amphibian Monitoring Program routes.

In 2001 Congress passed legislation to allow for funding of two new programs to help the states in reversing the trend of increasing numbers of species under consideration of being added to the Endangered Species List. The Wildlife Conservation and Restoration Program (WCRP) and the State Wildlife Grants Program (SWG) were the first concrete federal funding efforts provided to the states with the primary objective being the conservation of non-game wildlife and the habitats upon which they depend. By agreeing to accept this funding, all states were required to develop or commit to develop and submit a Comprehensive Wildlife Conservation Plan/Strategy (CWCS) by Oct. 1, 2005. The LNHP became the lead in 2004 in the formulation of the CWCS. The purpose of this strategy is to develop a blueprint for guiding LDWF in developing wildlife management actions for all species of wildlife with emphasis on species of conservation concern in Louisiana over the next 20 years.

### **Statewide Environmental Investigations Program**

Statewide Environmental Investigations is authorized under the U.S. Fish and Wildlife Coordination Act and is partially funded by a U.S. Fish and Wildlife Service Grant. Staff is responsible for reviewing and providing comments and mitigation recommendations on all permits from and action of state and federal environmental regulatory and construction agencies. Staff members

reviewed approximately 3,000 state and federal permit applications over the past year. There were 304 written comments issued on permit notices and projects containing mitigation recommendations. In addition to permit review, staff participates in permit site inspections, habitat evaluations and mitigation banking. They also provide technical assistance to the public on wetland issues. The section also works with private developers and consultants involved in the permit application process with the above regulatory government bodies.

LDWF works with numerous government agencies in conducting environmental investigations including U.S. Fish and Wildlife Service, National Marine Fisheries Service, Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Forest Service and the Natural Resources Conservation Service of the United States Department of Agriculture, Federal Highway Administration, Federal Aviation Administration, Farmers Home Administration, U.S. Coast Guard, Department of Energy, Federal Energy Regulatory Commission, Department of Defense, Housing and Urban Development, as well as Louisiana Department of Transportation and Development, Louisiana Department of Natural Resources, Louisiana Department of Environmental Quality and the Louisiana Department of Culture, Recreation and Tourism.

### **Louisiana Natural and Scenic Rivers Program**

The Scenic Rivers Program is charged with the administration of the Louisiana Natural and Scenic Rivers Act. There are currently approximately 80 streams and/or stream segments in the system including an estimated 3,000 linear miles of Louisiana's streams, rivers and bayous. The act requires that the department, through the Scenic River Coordinator, administer a permitting system for activities that have potential for significant ecological impact to designated Natural and Scenic Rivers and as well as a system of monitoring, surveillance, investigation and enforcement for the purpose of insuring compliance with the act. The Scenic Rivers Act and pursuant rules and regulations provide for the development of management plans, stream surveys and enforcement.

Several enforcement actions were initiated in 2004-2005. These included cases of illegal dumping/littering, operating on scenic rivers without permits and illegal timber harvests. The Scenic Rivers Coordinator, through routine surveillance, posted project inspections and response to complaints and ensured compliance with permit conditions, utilization of adequate sediment control measures and appropriate clean up and restoration of permitted project sites.

The Scenic Rivers Coordinator maintained regular contact with both state and federal agencies to insure that designated scenic rivers were considered in all levels of planning and permitting. The coordinator also worked closely with city planners, police juries, mayors and local interest groups and organizations throughout the state. One such project was the selection of the I-69 Corridor through Webster and Claiborne Parishes where the new interstate would cross Bayou Dorcheat and potentially Middlefork and Corney Bayous, all of which are Louisiana designated Natural and Scenic Rivers. Ultimately, Middlefork and Corney Bayous were eliminated entirely from consideration and

the Dorcheat crossing was given the highest priority as a factor in the final corridor selection process.

A total of 26 permits were issued during 2004-2005. An administrative law judge ruled in favor of the department on a permit denial from 2003 that had been appealed upholding that denial and affirming the department's understanding and application of its responsibility and authority under the Scenic Rivers Act.

### **Non-Game Program**

The Non-game Program coordinates non-game activities and coordinates the permitting and issuance of various related permits. Nuisance Wildlife Animal Control Operator permits are issued by the section to both qualified professionals and to private individuals who are having problems and are deemed capable of taking care of nuisance wildlife problems on their own. In 2004-2005, there were 52 Animal Control Operators and Nuisance Animal Control permits issued. The non-game program is also responsible for issuing several other types of permits, i.e. Scientific Collecting permits, Wildlife Rehabilitation permits and Special Purpose permits. In 2004-2005, 14 Wildlife Rehabilitator permits and 114 Scientific Collecting permits were issued. Countless calls are acted upon by the Non-game Program staff relating to injured wildlife. Such calls often require collecting and transporting injured wildlife and/or coordinating such activities with permitted wildlife rehabilitators or the LSU Veterinary School.

The Non-game Program provides technical assistance to governmental agencies, non-governmental organizations and the public. This program administers the Louisiana Statewide Red-cockaded Woodpecker Safe Harbor and Landowner Incentive Programs. Non-game biologists also coordinate and participate in the Monitoring and Avian Productivity and Survivorship (MAPS) study, red-cockaded woodpecker monitoring and shorebird surveys, mid-winter bald eagle surveys and others.

The Non-game Program staff is also heavily involved with issues related to the Louisiana black bear including issues related to human conflict with bears. In 2004-2005, 324 nuisance black bear incidents were acted upon by department staff.

The Non-game Program biologists represented the department in the following activities: Partners in Flight (PIF); the Southeast PIF Steering Committee; the West Gulf Coastal Plain Joint Venture for Land-bird, Shorebird and Colonial Water-bird Working Groups; Southeastern Association of Fish and Wildlife Agencies/The Wildlife Society (SEAFWA/TWS); Wetlands Wildlife Committee and Non-game and Threatened and Endangered Committees; the Atchafalaya Basin Non-game Committee; Barataria-Terrebonne National Estuary Program (BTNEP); Resident Bird Action Plan Team; the Louisiana Association of Wildlife Rehabilitators; the Ivory-billed Woodpecker Recovery Team; and the Louisiana Forestry Association Recreation and Endangered Species Committee.

### **Geographic Information Systems Program (GIS)**

The GIS program has become increasingly important to the mission of LDWF. The function of this program is to provide mapping and spatial data analysis assistance to all subdivisions of the department. That assistance includes creating maps and overlays,

data entry and manipulation and advice to our professional staff on the application of GIS technology.

The GIS Program was involved in the following projects: Legal Description maps; obtain state and federal data for Natural Heritage; Duck Flight lines; WMA map inventory; Gulf Coast maps; Manchac Prairie maps; Buffalo Cove project; Heritage Restoration maps; Black Bear Corridor acreage; U.S. Forest boundaries conversions; Louisiana/Mississippi border dispute; Water Navigation data; SWG Proposals; Scenic River updates; saltwater/freshwater line delineation; Potential Dredge maps; Oil Lease maps; Fish Tag Quad maps; Oyster Bayou maps; Right-of-Way maps on WMAs; Tunica Hills survey; Scenic River web page; Minden Field office maps; Eco-region maps; Hunter Education maps; Salvador Canal proposals; Bathymetric maps; Louisiana River maps; Martin Brother's mitigation maps; permit application mapping; Louisiana basin maps; Octavia Brother's maps; WLF WMA tract data; Inland Fisheries boundary maps; DOQQ photography hotlinks; Chicago Mills maps; deer maps; installation of software and updates; Upland Fallow Field map for Bayou Pierre; Wetland Certification maps of Catahoula Lake for RAMSAR; White Lake land loss measurements and maps; Maurepas Swamp/St. James acreage; House Bill 630 maps; Maurepas Swamp (Reserve Canal) information; Spanish Lake Acreage; deer GPS points; Salmen Property; Rockefeller Section dispute; Chicago Mills Phases; Biloxi Mineral Right maps; Atchafalaya Delta points; water feature maps; Maurepas Map display; LA Reservoirs map; Louisiana population parish; federal/state three mile line; Wisner boundary problems; Buckhorn Parcel maps; NOAA grant maps; land use; ownership pie charts; Webster/Bienville Parish boundary; Koch pipeline data; individual maps for every scenic river; provide data; and conversion and reprojection of data for Biotics.

The GIS Program also represented the department on the following committees:

1. Louisiana Geographic Information Systems Council (LGISC)  
-Full Member
  - promoting GIS use and development in Louisiana,
  - providing a forum for the coordination and cooperation of state GIS efforts,
  - coordinating acquisition of statewide data sets,
  - advising state agencies on acquisition and implementation of GIS and related activities,
  - facilitating the establishment of an infrastructure for network communication and data exchange among state GIS users.
2. Comprehensive Wildlife Conservation Strategy - Provides GIS support and a non wildlife biologist voice.
3. Gulf Coast Joint Venture (GCJV) GIS Committee Member - The following are the duties of a member:
  - provide technical review and guidance to the GCJV GIS/RS Analyst in incorporating biological input from other GCJV staff and committees into GIS models that depict priority conservation targets.
  - provide technical review and guidance to the GCJV GIS/RS Analyst regarding technical aspects of geospatial and remote sensing science (e.g., hardware, software, processing, metadata, modeling, etc.).

- establish long-term data development goals and standards consistent with GCJV mission, purpose and objectives.
- assist the GCJV GIS/RS Analyst in creating and maintaining an inventory of relevant geo-spatial data holdings by GCJV partners.
- guide the development and maintenance of an information delivery system via Internet FTP and ArcIMS website (*www.gcjv.Original*) to support accomplishments, goals and objectives of GCJV conservation plans.
- coordinate otherwise independent geospatial activities among GCJV partners to increase efficiency and effectiveness.
- determine the training needs of GCJV partners for using spatial data hardware and software applications and provide guidance in meeting the needed training.
- develop and standardize protocols for data development, formats and sharing including Quality Assurance/Quality Control procedures.
- maintain Level 1 FGDC metadata for all datasets.

4. WLF GIS Council - We have started an informal council to promote GIS at LDWF and to develop a GIS department similar to the other state agencies. Presently GIS is ad hoc at LDWF.
5. Louisiana GIS Strategic Planning Subcommittee - Maximize the effectiveness and efficiency of state government through the implementation of Geographic Information System (GIS) technology.

### ALLIGATOR PROGRAM

Louisiana's Alligator Management Program consists of two complex segments: research/management of the wild population and a statewide farm/ranch program. The program is funded by self-generated revenues (alligator hide tag fees, shipping label fees, other alligator related fees and alligator hide severance taxes).

#### Wild Alligator Program

Inventory methods, harvest regulations, tagging and reporting requirements and a complex computer program are continually upgraded to regulate and monitor a sustainable use alligator management program in Louisiana. Annual coastwide alligator nest surveys are conducted to index alligator populations and to establish harvest quotas in coastal Louisiana. In 2004, coastal nest production was an estimated 42,791 nests (Figure 1). Wild alligator harvest quotas are established to correlate harvest with alligator population density and distribution. Alligator harvest tags are allocated to individuals who either own or lease land that is considered alligator habitat.

Alligator program staff, with assistance from GIS specialists at USGS, developed a computer based alligator tag allocation system. Digital landowner and survey information are combined with the latest aerial photography images to allow for an accurate assessment of each participant's property. The majority of the lands enrolled in the wild alligator harvest program have been entered in the system.

The annual wild alligator harvest (September 2004) produced 30,447 alligators with a base value of over \$8 million. The experimental bonus tag program was continued in September 2004 to harvest more of the four to five foot alligators. Over 3,400 bonus alligators were harvested averaging 5.83 feet in length (Figure 2).

#### Alligator Farm Program

At the end of the 2004 calendar year, there were 61 licensed alligator farms/ranches in Louisiana (Figure 3). The December 2004 statewide farm/ranch inventory was over 533,000. The 2003 farm harvest (September 2003 - August 2004) was over 276,000 with a base value of \$29 million (Figure 2).

During 2004 a total of 619,730 wild alligator eggs were permitted for collection. Over 396,000 eggs were collected from which 349,311 alligators were hatched. Farmers are required to return 14 percent of the hatchlings as four foot alligators, which compensates for the collection of eggs. The remaining animals can be sold by the farmer. The release in 2004 totaled over 47,400 alligators. All released alligators were measured, marked, tagged, and sexed. Survival of farm-released alligators appears to be similar to wild alligators. Over 3,200 re-trapped alligators were harvested in September 2004, and data evaluation continues on survival rates of the farm released alligators.

Louisiana Coastal Marsh Alligator Nest Production: 1970-2004

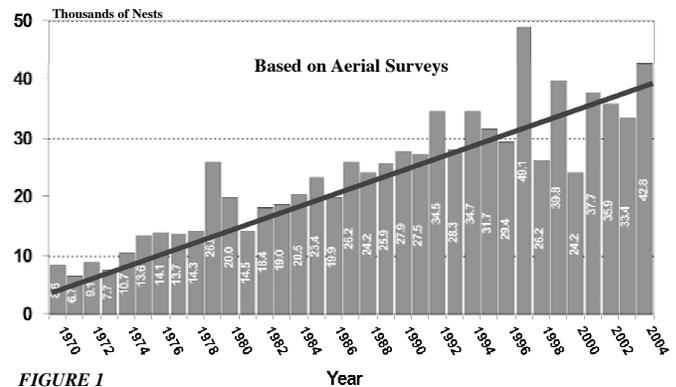


FIGURE 1

Louisiana Alligator Harvests: 1979-2004

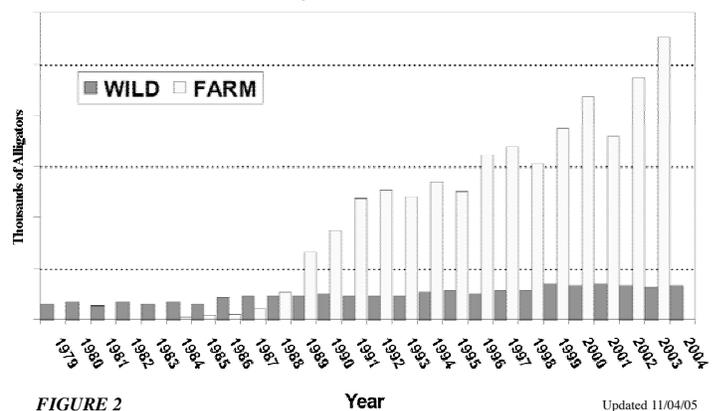


FIGURE 2

Farm Year End Inventories

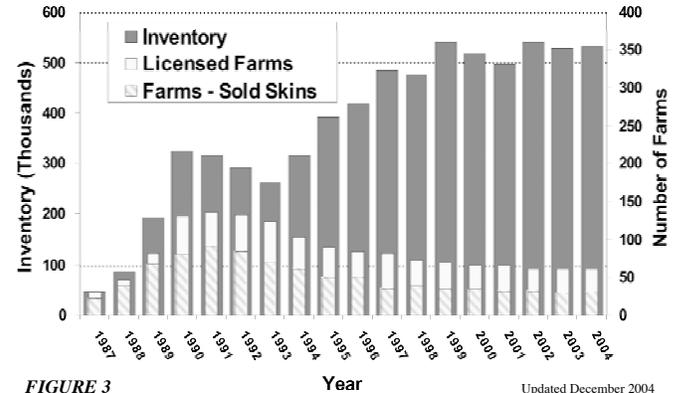


FIGURE 3

Updated December 2004

## Research Activities

A study was initiated in June 2000, in collaboration with Dr. Val Lance of San Diego, to evaluate onset of maturity in subadult alligators. As of September 2004, over 3,500 blood samples had been collected. Unexpectedly, even the smallest sized male alligators (two to three feet in length) had measurable plasma testosterone levels which increased as the average size of the alligator increased. Seasonal variation in hormone levels was noted in the smaller sized alligators as well. Over time many of these alligators have moved off Rockefeller Refuge, and were taken in subsequent September alligator harvests. This has provided a unique opportunity to study dispersal of alligators of both sexes and various sizes.

Another ongoing project our department is conducting involves using DNA technology to study paternity in alligators. We are expanding the study of paternal relationships between nests found close to each other in the marsh. Multiple paternity occurs more frequently than we originally thought, due to advances in detection ability. We hope to publish two manuscripts on these findings in the next year.

To increase our success in capturing female alligators at nest sites, we designed and built a "walk-in" live trap for alligators in summer 2002. It worked extremely well and we captured alligators ranging in size from 79.5-98 inches total length. We collected more data in 2003, 2004 and 2005 on trap effectiveness, and strategic trap placement has helped us collect several more valuable "re-trap" females to see if pair bonds exist.

In spring 2003, we initiated a study with researchers at Iowa State University to determine if telomere length can be used to determine the age of alligators, without the need to sacrifice the animal to count annular growth rings in the femur. This study was expanded in 2004 and results presented at an international meeting. We prepared a manuscript and it has been accepted for publication in the scientific literature.

This year we continued our collaboration with Dr. Mark Merchant at McNeese State University, who is studying the anti-microbial properties of alligator blood. Dr. Merchant is studying the immune system in alligators, which may help in the rare instances of disease in captive alligators, in terms of evaluating cause and treatment options. We published several papers with Dr. Merchant, and have characterized the complement system in alligators and how it is regulated. We are assisting Dr. Merchant with wound healing studies, which may be of value to the alligator farming industry.

We collected samples from alligators in spring 2005 for Dr. Kevin Gribbins to add to our preliminary study on the ultrastructure of the alligator testis. We also collected samples from nesting females for Dr. Hary Higby-Schweitzer, to evaluate if/how female alligators mobilize calcium for eggshell deposition.

We collaborated with scientists from APHIS to test control agents for nutria, to determine if the chemicals would be safe should alligators consume any residue. Studies were conducted in the holding tanks at Rockefeller Refuge, both during winter and with a summer phase planned for summer 2005. Results might be instrumental in limiting marsh losses due to nutria consumption of marsh vegetation.

We assisted Dr. Steven Gabrey at Northeastern Louisiana University with studies on the interaction of the nutria incentive harvest and alligator diets in experimental and control areas.

During September 2004, a total of 504 alligators were harvested on Timken and Salvador WMAs. Data analysis continues on sex ratios, size class frequency distribution, production rates and habitat utilization.

## Extension

LDWF biologists are actively involved in the IUCN's Crocodile Specialist Group. This requires extensive input on a number of issues concerning international crocodylian management programs. We often host visiting delegates from overseas, including leather industry personnel, researchers and producers.

We established contracts with both the LSU and Florida Schools of Veterinary Medicine to evaluate causes and treatment of hide imperfections in alligators. Diagnostic services are also available to Louisiana's alligator farmers/ranchers. Department personnel work closely as a liaison between the LSUSVM staff and industry personnel to improve the alligator's health and hide quality if possible.

Program staff routinely communicates with various alligator industry participants including hunters, farmers, landowners and dealers. Information is provided regarding wild alligator and alligator egg harvests, harvest statistics and management recommendations. Staff routinely visits alligator farms providing recommendations on alligator husbandry and culture. Numerous requests for information are handled each year. We began production of an informative newsletter to be mailed to alligator industry participants this year which has been well received.

## Publications/Cooperative Research

The following scientific papers were published from approximately July 2004 through June 2005.

Elsley, R. M., and P. L. Trosclair, III. 2004. "A new live trap for capturing alligators." *Herp. Review* 35(3):253-255.

Elsley, R. M., P. L. Trosclair III, and J. T. Linscombe. 2004. "The American alligator as a predator of mottled ducks." *Southeastern Naturalist*. Vol. 3, No. 3 pp. 381-390.

Farlow, J. O. and R. M. Elsey. 2004. "Femoral dimensions and mid-thigh circumference in *Alligator mississippiensis*." *Lethaia*. 37:401-405.

Merchant, M. E., D. Thibodeaux, K. Loubser, and R. M. Elsey. 2004. "Amoebacidal effects of serum from the American alligator (*Alligator mississippiensis*)." *J. Parasit.* 90(6):1480-1483.

Farlow, J. O., G. R. Hurlburt, R. M. Elsey, A. R. C. Britton, and W. Langston, Jr. 2005. "Femoral dimensions and body size of *Alligator mississippiensis*: estimating the size of extinct mesoeucrocodylians." *J. Vert. Paleo.* 25(2):354-369.

Lance, V., R. M. Elsey, and P. L. Trosclair, III. 2005. (Abstract). "Sexual maturation in male American alligators." *Proc. Soc. Integrative and Comparative Biology meeting*. January 2005. San Diego, California.

Merchant, M., R. M. Elsey, P. L. Trosclair III, and G. Diamond. 2005. (Abstract). "Broad spectrum antimicrobial activities of leukocyte extracts from the American alligator." Presented at the Louisiana Chapter of the American Fisheries Society Meeting, Baton Rouge. 4 February 2005.

Merchant, M. E., C. M. Roche, D. Thibodeaux, and R. M. Elsey. 2005. "Identification of alternate pathway serum complement activity in the blood of the American alligator (*Alligator mississippiensis*)." *Comp. Biochem. Physiol.* 141:281-288.

Merchant, M. E., B. Verret, and R. M. Elsey. 2005. "Role of divalent ions in serum complement activity of the American alligator (*Alligator mississippiensis*)." *Comp. Biochem. Physiol.* 141:289-293.

Several cooperative studies were undertaken or continued in 2004-2005 with university researchers to further the understanding of alligator physiology and husbandry.

- Baseline studies on lead levels and other factors in the alligator and its role in nutrition/disease of farm raised alligators (one manuscript prepared; Master's student project initiated).
- Studies on regulatory mechanisms of development of the pulmonary system in alligators.
- Studies on the development of the brain, musculoskeletal system and dental system in hatchling alligators, and how oxygen levels affect development.

# **OFFICE OF FISHERIES**

*The Office of Fisheries is comprised of two divisions, Marine Fisheries and Inland Fisheries.*

## **MARINE FISHERIES DIVISION**

The Marine Fisheries Division is charged with management of the full range of Louisiana's estuarine and marine resources. Division responsibilities are categorized as Fisheries Management Programs and Habitat Protection Programs. In addition, the Marine Fisheries Division manages four public oyster seed reservations, three public oyster seed grounds and one public oyster tonging area, administers the oyster lease survey program and seismic program. Participation in numerous local, state, regional, national and international committees, task forces and councils provides professional expertise in the development of state and federal legislation and standards governing the wise use of renewable natural resources.

## **INLAND FISHERIES DIVISION**

The Inland Fisheries Division manages fish populations and habitats for the conservation and improvement of sport and commercial fishing primarily in freshwater areas of the state. Division responsibilities are divided into two major categories: Management and Aquatic Habitat Management.



# MARINE FISHERIES

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## FISHERIES MANAGEMENT PROGRAMS

Fisheries Management Programs include Shellfish Management, Mollusk Management and Finfish Management. In addition to headquarter operations, division responsibilities are conducted through seven coastal study areas and the Lyle S. St. Amant Marine Laboratory (Map 1).



MAP 1. Coastal study area boundaries.

## Shellfish Management

The Marine Fisheries Division continued its long-term trawl sampling program throughout coastal Louisiana. Fishery biologists collected 1,012 6-foot trawl and 1,965 16-foot trawl samples from both inshore and offshore waters in each of the seven coastal study areas. Data from these samples were used to recommend season frameworks for both the fall and spring inshore shrimp seasons and winter territorial sea shrimp seasons. Additionally, these same data were used to recommend season extensions and special seasons, and provide recruitment indices for Gulf menhaden and blue crabs.

## Shrimp

Shrimp are this state's most valuable commercial fishery, and Louisiana continues to lead the nation in shrimp landings.

Louisiana shrimp landings in 2004 totaled approximately 84.7 million pounds (all species combined/heads-off weight) and accounted for \$139.8 million in dockside sales.



PICTURE 1. Shrimp Fleet.

These figures represent increases of approximately 9 percent in landings and 2.5 percent in dockside value from levels reported in 2003.

Due to significant differences in patterns of shrimp recruitment, growth and immigration between geographic areas, the Louisiana coast has been divided into three Shrimp Management Zones to better manage the resource (Map 2). Shrimp management recommendations are listed below by zone.



MAP 2. Louisiana Shrimp Management Zones.

- Zone 1** Mississippi-Louisiana state line to the eastern shore of South Pass of the Mississippi River.
- Zone 2** Eastern shore of South Pass of the Mississippi River to the western shore of Vermilion Bay and Southwest Pass at Marsh Island.
- Zone 3** Western shore of Vermilion Bay and Southwest Pass at Marsh Island to the Louisiana-Texas state line.

## Shrimp Management Recommendations

### *Shrimp Management Zone I*

#### *2004 - Spring Inshore Shrimp Season*

- Zone I closed on Jul. 6, 2004 except for that portion of Mississippi Sound originating at a point along the Mississippi-Louisiana territorial sea boundary at longitude 89° 30' 00" W thence due south to a position at latitude 30° 05' 00" N and longitude 89° 30' 00" W thence southeasterly to the U.S. Coast Guard navigational light off the eastern shore of Three-Mile Pass at latitude 30° 03' 12" N and longitude 89° 21' 30" W thence northeasterly to a position which intersects the menhaden line as described in the Menhaden Rule (LAC 76:VII, 307D) north of Isle au Pitre at latitude 30° 10' 00" W.
- That portion of Mississippi Sound described above as well as the open waters of Breton and Chandeleur Sounds remained open to shrimping throughout the spring shrimp season.
- Breton and Chandeleur Sounds closed on Mar. 31, 2005.

#### *2004 - Fall Inshore Shrimp Season*

- Opened Aug. 9, 2004
- Closed Dec. 21, 2004

#### *2005 - Spring Inshore Shrimp Season*

- Opened on May 23, 2005 including Breton and Chandeleur Sounds.

- Closed Jun. 27, 2005 except for that portion north and east of the Mississippi River Gulf Outlet (MRGO) and north of the Gulf Intracoastal Waterway (IGWW) from its juncture with the MRGO to its juncture with the Industrial Canal including the waters of the MRGO, Lake Pontchartrain, Lake Borgne and the open waters of Breton and Chandeleur Sounds described in the menhaden rule (LAC 76:VII,307D)
- The remaining portion of Zone 1 closed Jul. 3, 2005 except for that portion of Mississippi Sound from a position along the Mississippi-Louisiana state line at latitude 30° 09' 39.67" N and longitude 89° 30' 00" W thence southeastward to the US Coast Guard navigational light off the eastern shore of Three-Mile Pass at latitude 30° 03' 12" N and longitude 89° 21' 30" W thence northeasterly to a position which intersects the menhaden line as described in the Menhaden Rule (LAC 76:VII, 307D) north of Isle au Pitre at latitude 30° 10' 00" W, which closed Jan. 30, 2006.
- The open waters of Breton and Chandeleur Sounds described in the menhaden rule (LAC 76:VII,307D) will close Mar. 31, 2006.

*Shrimp Management Zone II*

Offshore territorial waters south of the inside/outside shrimp line from the eastern shore of Freshwater Bayou Canal at longitude 92° 18' 33" W to the eastern shore of Belle Pass at latitude 29° 05' 07" N and longitude 90° 13' 30" W closed to shrimping on Jan. 10, 2005.

Offshore territorial waters south of the inside/outside shrimp line and east of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel red buoy line to the eastern shore of Belle Pass at latitude 29° 05' 07" N and longitude 90° 13' 30" W reopened to shrimping Apr. 4, 2005.

Offshore territorial waters south of the inside/outside shrimp line and west of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the western shore of Freshwater Bayou Canal at longitude 92° 18' 33" W reopened to shrimping on May 16, 2005.

A portion of these state offshore territorial waters extending south of the inside/outside shrimp line from the western shore of Freshwater Bayou Canal at longitude 92° 18' 33" W to the eastern shore of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel red buoy line were closed to shrimping on Jan. 9, 2006.

An additional portion of state offshore territorial waters extending south of the inside/outside shrimp line from the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel red buoy line to the U.S. Coast Guard navigational light off the northwest shore of Caillou Boca at latitude 29° 03' 10" N and longitude 90° 50' 27" W was closed to shrimping on Jan. 30, 2006.

*2004 - Spring Inshore Shrimp Season*

- Opened May 14, 2004
- Closed Jun. 16, 2004

*2004 - Fall Inshore Shrimp Season*

- Opened Aug. 2, 2004
- Closed Dec. 21, 2004

*2005 - Spring Inshore Shrimp Season*

- Opened May 16, 2005
- Closed Jun. 27, 2005

*Shrimp Management Zone III*

*2004 - Spring Inshore Shrimp Season*

- Opened May 31, 2004.
- Closed Jun. 29, 2004 except for that portion of the Calcasieu Ship Channel originating at Channel Marker 68 southward to a point originating along the inside/outside shrimp line at Calcasieu Pass and including East Pass from its origin at the Calcasieu Ship Channel to the south end of Calcasieu Lake and West Pass from its origin at the Calcasieu Ship Channel to the south end of West Cove.
- Remainder of Zone III closed on Jul. 6, 2004.

*2004 - Fall Inshore Shrimp Season*

- Opened Aug. 9, 2004
- Closed Dec. 21, 2004

*2005 - Spring Inshore Shrimp Season*

- Opened Jun. 2, 2005
- Closed Jul. 3, 2005

Commercial landings since 1976 have ranged from a high of 93.7 million pounds reported in 1986 to 49.4 million pounds landed in 1983 (Figure 1). Brown shrimp landings in 2004 were greatest during May followed by June and July while white shrimp production peaked in October at 17 million pounds. Seabob landings were highest during late fall and early winter (Figure 2).

LOUISIANA COMMERCIAL SHRIMP LANDINGS  
(All Species Combined/Heads-Off Weight)

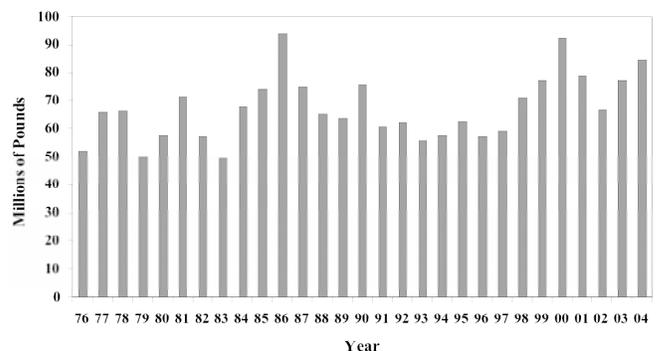


FIGURE 1.

2004 MONTHLY LOUISIANA SHRIMP LANDINGS BY SPECIES (Heads-On Weight)

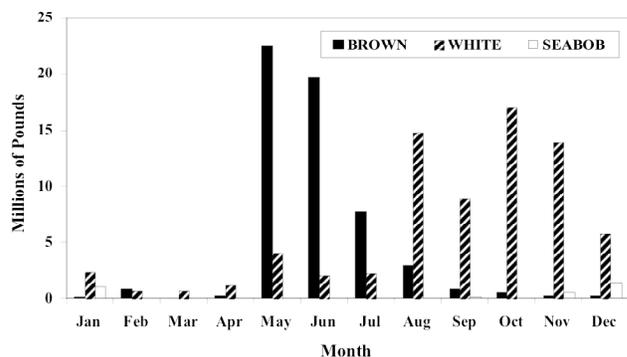


FIGURE 2.

### Federal Aid Projects

The Marine Fisheries Division has continued the administration of an \$8.68 million federal grant (Louisiana Shrimp Fisheries Disaster Assistance Grant - NOAA/DOC Award No. NA03NMF4520310). The grant activities, which include providing economic assistance to commercial shrimp fishers who have a demonstrated record of compliance with turtle excluder and bycatch reduction device regulations, incentives to commercial shrimp fishers to ensure widespread and proper use of turtle excluder and bycatch reduction devices in the fishery and personal assistance to commercial shrimp fishers, have been completed. Activities related to the promotion and marketing of wild caught Louisiana shrimp and the initiation of a quality certification and marketing program in conjunction with the Southern Shrimp Alliance continue.

The Marine Fisheries Division has also continued the administration of a \$146,073 federal grant (Interjurisdictional Assessment and Management of Louisiana Coastal Fisheries -NOAA/DOC Award No. NA03NMF4070125). The objective of the Interjurisdictional Fisheries Project was to maintain a coast-wide monitoring program for parameters relevant to important fisheries resources, including both population dynamics and associated hydrological and environmental parameters, and to use information gathered to make rational management decisions. Technical biological and hydrological data gathered from the monitoring program were utilized in establishing seasonal frameworks within the shrimp and oyster fisheries, predicting annual gulf menhaden abundance and providing data for the management of groundfishes and blue crabs. These data have provided estimates of size, density and growth of juvenile penaeid shrimp on the nursery grounds and staging areas, movement of sub-adult shrimp from the nursery grounds to staging areas, and provided abilities to correlate juvenile shrimp response and subsequent production to hydrologic conditions. Data collected from the monitoring program were crucial in establishing opening and closing dates for shrimp seasons within Louisiana inside and outside territorial waters during the fiscal year. Hydrological and biological data collected on oyster recruitment (spat set) and oyster density and availability estimates were used in formulating management recommendations regarding the oyster season on the public oyster seed grounds and seed reservations. Harvest estimates were determined from boarding report surveys of boats fishing the public seed grounds and seed reservations. These data were compared with annual stock availabilities and previous production estimates calculated during the fiscal year.

### Crabs

Louisiana commercial blue crab landings for 2004 totaled approximately 44.1 million pounds and accounted for \$29 million in dock-side sales. Blue crab landings represent an 8 percent decrease from 2003 landings of approximately 47.7 million pounds (Figure 3). A major issue in the fishery is the low prices associated with increased foreign imports of crabmeat.

Stone crab landings for 2004 were 1,669 pounds. Stone crab landings decreased approximately 84 percent from the 2003 landings of 12,278 pounds. The stone crab fishery in Louisiana is not a directed fishery and stone crabs are primarily taken as incidental

LOUISIANA COMMERCIAL BLUE CRAB LANDINGS

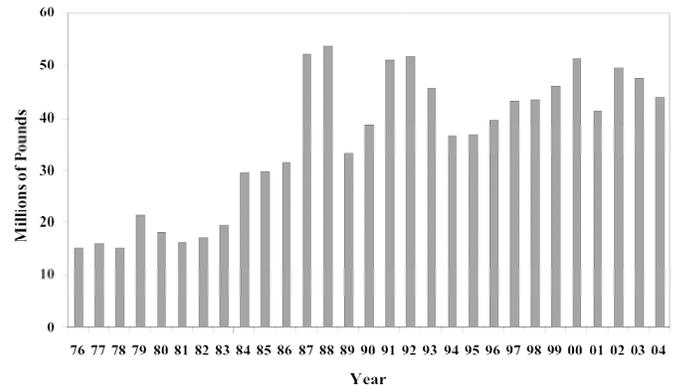


FIGURE 3.

bycatch within the blue crab fishery. Variations in annual stone crab landings are primarily due to salinity levels with higher abundance associated with dry years.

The major department activity related to blue crabs in 2004-2005 was removing derelict crab traps from coastal waters. Legislation introduced by the department in 2003 gave the commission the authority to establish a derelict crab trap removal program.

In 2005, four crab trap closures and derelict crab trap clean ups were conducted:

- A portion of Sabine Lake over a 10-day period from 6:00 a.m. on Feb. 18 through 6:00 a.m. Feb. 27.
- A portion of Terrebonne Bay Estuary over a 16-day period from 6:00 a.m. on Mar. 5 through 6:00 a.m. Mar. 20.
- A portion of Breton Sound Estuary over a 16-day period from 6:00 a.m. on Feb. 26 through 6:00 a.m. Mar. 13.
- A portion of Vermilion Bay/West Cote Blanche Bay over a 9-day period beginning at 6:00 a.m. on the opening day of the spring inshore shrimp season (May 16) and ending nine days later (May 24) at 6:00 a.m.

A total of 4,623 abandoned crab traps were collected during the four crab trap clean ups. LDWF personnel collected the largest percentage of traps (43.6 percent). Recreational fishermen provided the most effort (41.8 percent). A total of 113 documented volunteers expended 620.9 hours in trap clean up efforts (Figure 4).

The number of derelict crab traps provides a basis to evaluate the success of the four abandoned crab trap clean ups. The Terrebonne Bay and Breton Sound shallow water winter clean ups, which were dependent upon a broad-based group of volunteers from various user groups, were successful. The numbers of derelict crab traps were significantly reduced throughout the Terrebonne Bay closure area and near the Delacroix and Pointe a la Hache disposal sites in the Breton Sound closure area. The relatively higher number of volunteers and smaller area of the Terrebonne Bay closure area contributed to more complete coverage and a higher number of collected traps than for the Breton Sound clean up. More abandoned crab traps would have been collected in Breton Sound if more volunteers would have been present. The Vermilion Bay and Sabine Lake deep water clean ups were not as successful for several reasons. These closure areas contained very little shallow marsh habitat, where most visible derelict crab traps are

FIGURE 4. Results from 2004-2005 derelict crab trap removal.

|                        | Boat-days    |            |           |                         | Volunteers | Hours        | Crab Traps Collected |
|------------------------|--------------|------------|-----------|-------------------------|------------|--------------|----------------------|
|                        | Recreational | Commercial | LDWF      | Other Agency/University |            |              |                      |
| Terrebonne Bay         | 14           | 3          | 13        | 6                       | 57         | 316          | 2,437                |
| Breton Sound           | 7            | 3          | 5         | 1                       | 54         | 298.3        | 1,941                |
| Vermillion Bay*        | 0            | 0          | 3         | 0                       | --         | --           | 241                  |
| Sabine Lake            | 0            | 2          | 0         | 0                       | 2          | 6.6          | 4                    |
| <b>Total</b>           | <b>21</b>    | <b>8</b>   | <b>21</b> | <b>7</b>                | <b>113</b> | <b>620.9</b> | <b>4,623</b>         |
| <b>Traps Collected</b> | 14.3%        | 19.1%      | 43.6%     | 10.8%                   |            |              |                      |
| <b>Effort**</b>        | 41.8%        | 16.4%      | 31.3%     | 10.4%                   |            |              |                      |

\*72 crab traps from an unknown number of shrimp boats. Number of shrimp fishermen volunteers is unknown because traps were brought for disposal when LDWF personnel were not present.

\*\*Effort as measured by boat-days for each volunteer category and overall number of volunteers and hours at each site.

found. Additionally, the Sabine Lake closure area is subjected to relatively low levels of fishing effort as measured by the number of crab traps. The low numbers of traps collected in Vermillion Bay likely resulted from the possible reluctance of shrimp fishermen to retain traps for later disposal at shore based disposal sites.

The overall number of traps removed in 2005 (4,623) was approximately two-thirds the 2004 total (6,894). This reduction was related to the reduction in volunteer effort and possibly to the density of traps in the closure areas. Total volunteer effort was less in the three 2005 winter closures (36 boat days) than in the single 2004 winter closure (90 boat days). While substantial numbers of visible derelict crab traps were present in the 2005 Terrebonne Bay and Breton Sound closure areas, the 2004 upper Terrebonne Bay closure area may have had the highest density of visible derelict crab traps in Louisiana.

The Louisiana Crab Task Force has continued to meet and address issues that confront the industry. Legislation approved during the spring 2005 legislative session included additional fees on commercial and recreational crab trap gear licenses with added fees dedicated to funding the crab trap removal program. The Louisiana Seafood Promotion and Marketing Board (LSPMB) sponsored blue crab promotional and marketing activities. The Crab Task Force also continues discussions on a limited entry program for commercial blue crab fishery and impacts of crabmeat imports

#### Special Bait Dealer Permits

A total of 55 special bait dealer permits were issued to licensed wholesale/retail seafood dealers for the sale of live bait shrimp during 2004. Permitted dealers reported harvesting a total of 1,633,251 live shrimp and 322,114 live Atlantic croaker during the permit period. Dealers also reported a total of 1,057 trips taken during the permit period and sales of 17,883 pounds of dead shrimp. St. Bernard Parish dealers led all dealers in the number of live shrimp harvested followed by dealers in Cameron, St. Tammany, Jefferson, Plaquemines, Terrebonne and Lafourche Parishes. Dealers in St. Bernard Parish led all others in the number of trips taken while dealers in Jefferson Parish led all in the

number of live croaker harvested. Assuming retail values of 20 cents for live shrimp and 25 cents for live croaker, the total dock-side value of live shrimp and croaker marketed by permitted bait dealers during the permit period was approximately \$332,665 and \$80,529, respectively. Sales of dead shrimp marketed by permittees contributed an additional \$26,824 in retail sales generating a total estimated retail value of \$430,018 for the permitted live bait fishery in 2004.

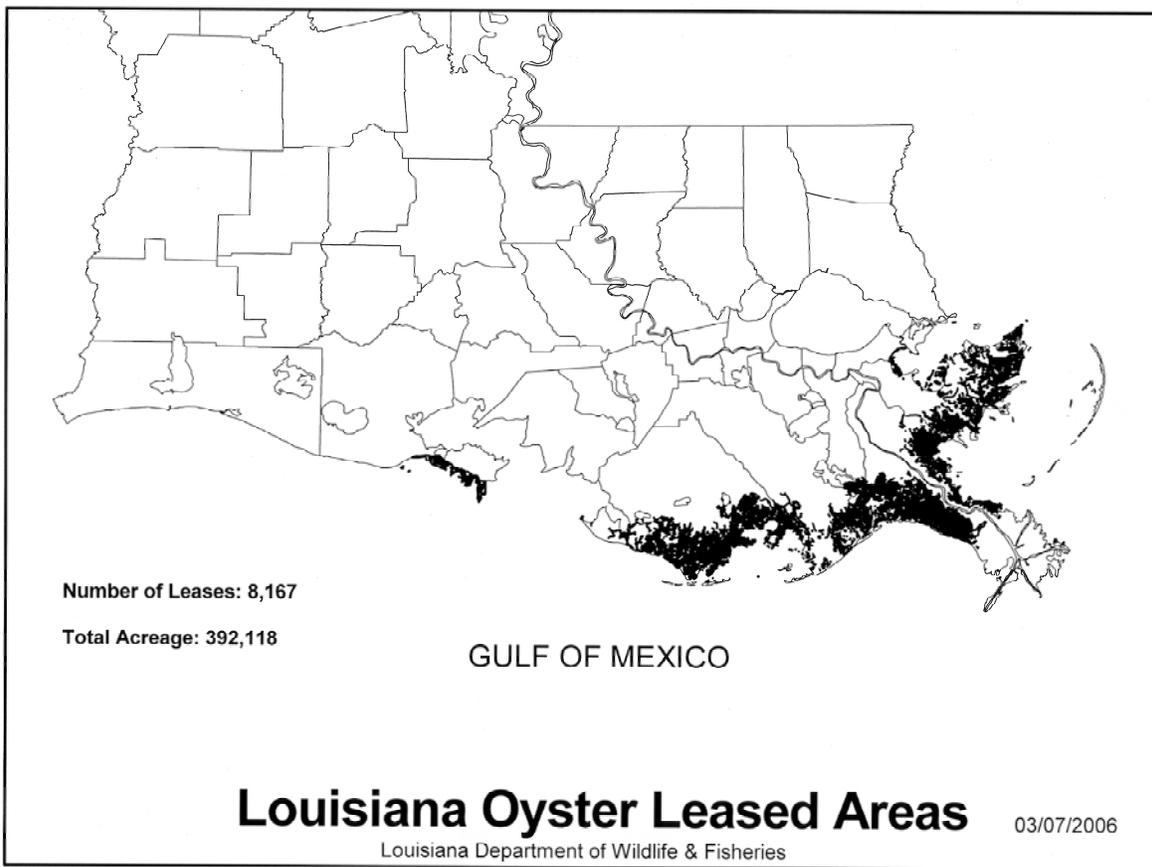
#### Mollusk Management

The Mollusk Program manages the oyster resource on over 1.6 million acres of public oyster seed reservations, public seed grounds, public oyster areas and public tonging areas. Seed grounds are designated by the Wildlife and Fisheries Commission and include a large continuous area east of the Mississippi River, as well as areas of the Vermilion/Cote Blanche/Atchafalaya Bay system. Seed reservations, public oyster areas and tonging areas are designated by the legislature. The department manages four seed reservations, including one east of the Mississippi River (Bay Gardene), one in Barataria Bay and two in Terrebonne Parish (Sister Lake and Bay Junop).

The Calcasieu Lake Public Oyster Area previously restricted commercial harvest to tonging. However, a 2004 law change allowed for the use of hand dredges to harvest the oyster resources located in the lake beginning in the 2004-2005 oyster season. Sabine Lake is the only public tonging area in Louisiana, but poor water quality prohibits oyster harvest based on public health concerns. Seed grounds and reservations are managed with the goal of providing seed oysters for transplant onto private oyster leases (Map 3). However, a "Sacking Only Area" exists east of the Mississippi River in portions of Lake Fortuna and Lake Machias for the exclusive harvest of sack-sized oysters. Oyster harvesters use mechanical dredges on public grounds and reservations, and hand dredges with no mechanical assistance in the Calcasieu Lake Public Oyster Area. Harvest is restricted to the use of hand tongs in Sabine Lake.

Six additional public grounds were designated in 2000 to be developed for oyster production, these grounds include portions of Barataria Bay, Deep Lake, Lake Felicity, Lake Chien, Lake Tambour and Lake Mechant. Initial site selection for new reefs in these areas was completed in 2002-2003 by utilizing side-scan sonar technology to analyze water bottoms. Barataria Bay, Lake Chien, Lake Felicity and Lake Mechant were chosen as locations for reef-building activities in fiscal year 2004-2005 funded by the federal government through the Coastal Impact Assistance Program (CIAP). This project placed roughly 35,000 cubic yards of crushed concrete and limestone rock on suitable water bottoms in these areas in May/June 2004. Biological monitoring of the new reefs began immediately and will continue through July 2006.

Additional reef building projects were the result of a federal disaster grant secured by LDWF following Hurricane Lili and Tropical Storm Isidore in September/October 2002. Reef building activities in Hackberry Bay and Sister Lake were planned and carried out in May/June 2004. Over 20,000 cubic yards of cultch material were placed on suitable water bottoms in Hackberry Bay



MAP 3.

and Sister Lake. Biological monitoring began immediately after cultch planting and will continue through July 2006.

Oysters provide an economic benefit to the state, and the ecological benefits of oyster reefs are very important as well. Oysters are biomonitors of the overall health of the ecosystem and provide forage and shelter habitat for a variety of fish and invertebrate species. Oysters also affect water quality through filter-feeding activities, affect estuarine current patterns and may provide shoreline stabilization. Because oysters are both economically and ecologically important, wise management of the public oyster resource is critically important to ensure that this valuable species continues to thrive in Louisiana's coastal areas.



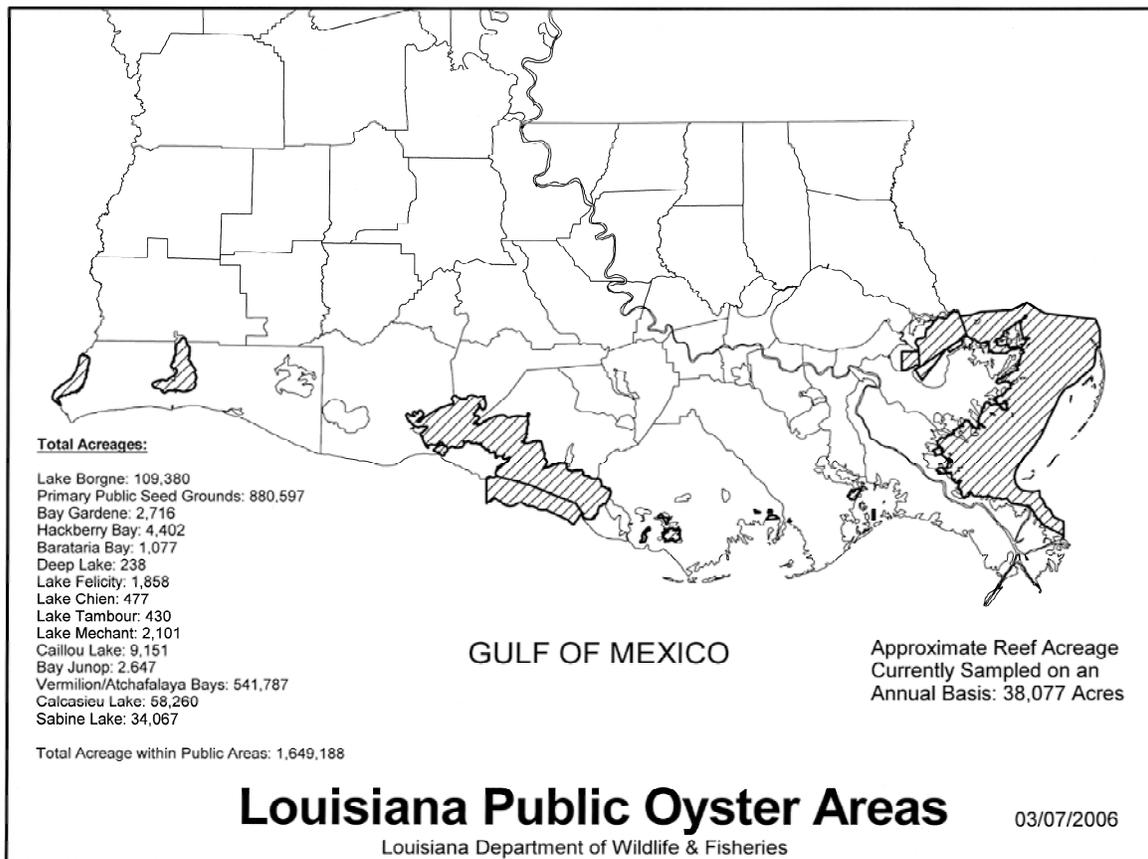
PICTURE 2. An oyster lugger, *The Diplomat*, harvests seed oysters from the Sister Lake Public Oyster Seed Reservation.

Statutory provisions mandates that the department open the oyster season on Louisiana public seed grounds on the first

Wednesday following Labor Day of each year and close these areas no later than April 1 of each year. However, the Louisiana Wildlife and Fisheries Commission is authorized to extend the season to May 15 provided sufficient stocks are available for harvest. The Secretary of the LDWF may close seasons on an emergency basis if oyster mortality occurs, or delay the season/close areas where significant spat catch has occurred with good probability of survival, or if excessive amounts of shell in seed oyster loads occur. Management practices often use rotational openings of the four Oyster Seed Reservations in alternating years.

Management of the public oyster grounds, reservations and tonging areas (Map 4) relies heavily upon data gathered through a comprehensive monitoring program. This program provides quantitative and qualitative data on oyster populations and other reef-associated animals. Approximately 190 square-meter samples are collected each July and over 150 dredge samples are collected from March through October. Square-meter data are collected using SCUBA and the data are used to measure the annual oyster stock size and for yearly season recommendations by the department. Dredge data are used to monitor the overall health of the oyster resource during the year and to assess recruitment of new age classes of oysters into the population. Field biologists also gather hydrological data on public oyster areas and develop harvest and fishing effort estimates by conducting boarding report surveys of oyster boats.

Unequaled in oyster production over recent years, Louisiana consistently produces one of the most abundant and valuable oyster resources in the nation. Averaging nearly 14 million pounds per



MAP 4.

year, Louisiana accounted for approximately 55 percent of all Gulf of Mexico oysters and was responsible for 50.5 percent of all oysters landed in the United States in 2004 (Figure 5).

The importance of the oyster resource to Louisiana's economy is evident as Louisiana commercial oyster landings had a dockside value of over \$35.2 million in 2004.

Oyster landings in Louisiana are divided between harvest from public oyster areas and private oyster leases. Oyster season on the public grounds generally runs from September to April (Figure 8), but may extend through mid-May only after approval by the Louisiana Wildlife and Fisheries Commission. Historically, landings from private leases have comprised 60-80 percent of annual Louisiana oyster landings, and, in 2004, 70 percent of all oysters harvested in Louisiana came from private leases (Figure 6). Although the majority of oyster landings in recent years have come from private leases, the public oyster grounds continue to significantly contribute to annual oyster landings as landings in 2004 measured 4.1 million pounds of oyster meat (Figure 6).

The majority of available public oyster stocks are located east of the Mississippi River in Coastal Study Areas I and II and these areas of the state contribute the most to annual public oyster landings (Figure 7). These areas also provide large amounts of seed for transplant to leases.

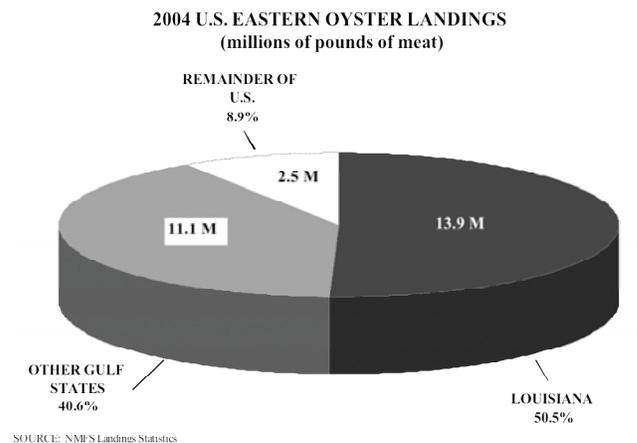


FIGURE 5.

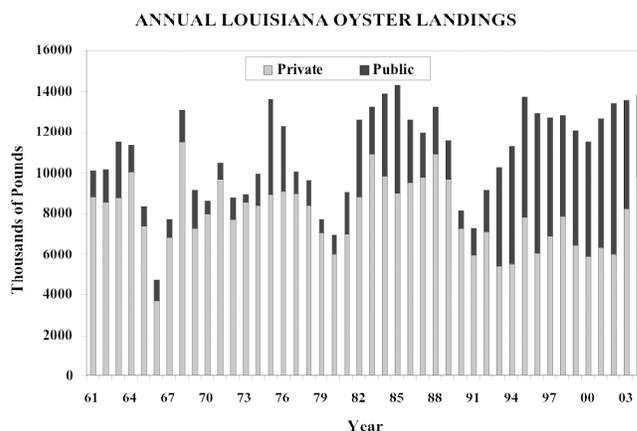


FIGURE 6.

2004 OYSTER STOCK SIZE BY COASTAL STUDY AREA  
ON THE PUBLIC GROUNDS

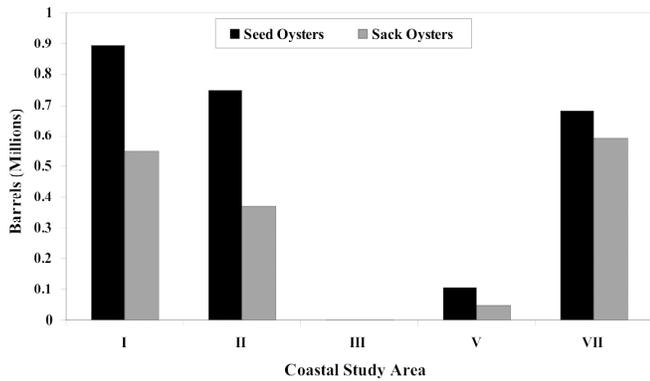


FIGURE 7.

FIGURE 8. 2004-2005 Oyster Season Dates

| Public Oyster Area   | Season Opening         | Season Closure   |
|--|------------------------|------------------|
| Lake Borgne Public Oyster Seed Ground and that portion of the Primary Public Oyster Seed Grounds east of the Mississippi River bordered on the north by the Mississippi-Louisiana state line and on the south by the Mississippi River Gulf Outlet (MRGO)  | September 15, 2004     | April 1, 2005    |
| That portion of the Primary Public Oyster Seed Grounds east of the Mississippi River bordered on the north by the MRGO and on the south by the Mississippi River and North Pass including the sacking only area of the public grounds which is generally Lake Fortuna and Lake Machias to a line from Mozambique Point to Point Gardner to Grace Point at the MRGO | October 1, 2004        | April 1, 2005    |
| Bay Gardene Seed Reservation   | September 15, 2004     | April 1, 2005    |
| Bay Junop Public Oyster Seed Reservation   | October 1, 2004        | October 10, 2004 |
| Lake Mechant Public Oyster Seed Ground except for the 2004 cultch plant  | October 11, 2004       | October 31, 2004 |
| Vermilion, East and West Cote Blanche and Atchafalaya Bay Public Oyster Seed Ground  | September 8, 2004      | April 1, 2005    |
| Calcasieu Lake Public Tonging Area   | October 15, 2004       | April 30, 2005   |
| Hackberry Bay Public Oyster Seed Reservation   | Season Remained Closed |                  |
| Sister Lake Public Oyster Seed Reservation   |                        |                  |
| Barataria Bay Public Oyster Seed Ground  |                        |                  |
| Deep Lake Public Oyster Seed Ground  |                        |                  |
| Lake Tambour Public Oyster Seed Ground   |                        |                  |
| Lake Chien Public Oyster Seed Ground   |                        |                  |
| Lake Felicity Public Oyster Seed Ground  |                        |                  |
| Lake Felicity Public Oyster Seed Ground  |                        |                  |

**Oyster Leasing**

The moratorium on the issuance of new oyster leases, at the request of Louisiana Department of Natural Resources (LDNR), remained in affect throughout fiscal year 2004-2005. The moratorium was requested in order to reduce the state's liability related to coastal restoration efforts. This moratorium does not affect lease renewals, and 702 renewal applications were processed.

The Oyster Lease Survey Section continues to maintain a website, which provides information to the public about oyster leasing in Louisiana. This website contains recent news articles about oysters and a searchable Geographic Information System (GIS) database of current leases, landings and harvest statistics. The website has had thousands of visits since it was developed and placed on the Internet in March of 1998, and is available at: <http://oysterweb.dnr.state.la.us/oyster>.

**Finfish Management**

The primary objective of the finfish program is to make rational recommendations for the management of coastal finfish stocks based on a database of scientific information. The information in the database is collected through fishery independent and fishery dependent sampling. These programs are cooperative with NMFS and the Gulf States Marine Fisheries Commission. The fishery independent monitoring program is an ongoing collection of data by LDWF biologists in the field conducting surveys designed to sample coastal waters in an objective manner. Such surveys collect information based on geographic ranges independent of commercial or recreational fishing operations. The Marine Fisheries Division fishery dependent monitoring program collects information from fishermen, processors and observers based on methods developed by NMFS for similar programs.

**Fishery Independent Monitoring**

A comprehensive monitoring program was developed in 1985 to protect or enhance these valuable resources by providing information regarding the status of fish stocks that occur in the coastal waters of Louisiana at some time during their life cycle. Three gear types were used coastwide to sample various year classes of estuarine dependent fish.

A bag seine was used to sample young of the year and provide information on growth and movement. A gill net was used to sample juvenile, sub-adult and adult fish and provides information on relative abundance, year class strength, movement and gonad condition. A trammel net was used to provide information on relative abundance, standing crop and movement. Gill net samples are collected semi-monthly from April through September, and monthly from October through March using a strike net technique. The gill nets are set in a crescent shape, open towards the shoreline and then circled several times by the sampling boat, driving those animals present into the net. Trammel net samples are taken monthly from October through March. Seine samples are taken monthly from January through August, and semi-monthly from September through December. Hydrological readings (conductivity, salinity and water temperature) are collected with each biological sample, as are wind direction and speed. Samples are collected at specific locations arranged in such a manner so as to cover the beach, mid-marsh and upper marsh areas of all major bay systems throughout coastal Louisiana. The catch and hydrological information is summarized for each Coastal Study Area on a monthly basis to give resource managers information on the current condition of the resource. The pertinent life history information for the important species is also used in developing analytical and predictive models. During fiscal year 2004-2005, 705 (100 percent) seine samples, 811 (100 percent) gill net samples and 246 (100 percent) trammel net samples were

completed for a 100 percent completion rate. Management recommendations based upon these observations and other information are listed below.

#### 2004-2005 Finfish Management Recommendations

##### *July 2004*

- Commercial large coastal shark second semi-annual season opened on the 1st at 12:01 a.m.
- Commercial king mackerel season opened on the 1st at 12:01 a.m.
- Rules on harvest of sharks amended effective July 20th.

##### *August 2004*

- Spring commercial red snapper season closed on the 10th at noon.
- Commercial large coastal shark second semi-annual season closed on the 15th at 11:30 p.m.
- Commercial deep water grouper season closed on the 8th at noon.

##### *October 2004*

- Open fall commercial red snapper season on the 1st at noon for the first ten days of each month.
- Commercial king mackerel season closed on the 21st at noon.
- Recreational red snapper season closed on the 31st at midnight.

##### *December 2004*

- Commercial shallow water grouper season closed on the 3rd at 12:01 a.m.
- Commercial red snapper season closed on the 15th at noon.

##### *January 2005*

- Set 2005 red snapper recreational season.
- Set 2005 red snapper commercial season.
- Secretary provided with authority to close commercial seasons of reef fishes if quota for species group is filled in federal waters.
- Set 2005 king mackerel commercial season.
- Commercial large coastal shark first semi-annual season opens on the 1st at 12:01 a.m.

##### *February 2005*

- Present 2005 stock assessments for striped mullet, black drum, Southern flounder and sheepshead.
- Commercial red snapper season opened on the 1st at noon for the first ten days of each month.

##### *April 2005*

- Commercial and recreational shark fishing closed until June 30th.
- Red Snapper Southeast Data Assessment and Review - review of assessment of Gulf stock.
- Recreational red snapper season opens on the 21st at 12:01 a.m.

The Finfish Management Program interacts with other department, state, regional and national issues. The program contributes to the Gulf and Atlantic Aquatic Invasive Species Task Force that engenders cooperation on these issues for states from South Carolina to Texas and Mexico. It is also part of the Louisiana Aquatic Invasive Species Task Force. It works with the Gulf of Mexico Fishery Management Council Stock Assessment Panel to evaluate the status of fish stocks managed by the council. This

program works with the Gulf States Marine Fisheries Commission to develop fishery management plans and stock assessments for state-managed fisheries that have inter-jurisdictional management considerations. The program also contributes to department consideration on permitting issues that relate to finfish including coastal use permits, Liquefied Natural Gas (LNG) terminals, mariculture and artificial reefs. Division personnel updated stock assessments for black drum, striped mullet, southern flounder and sheepshead in 2004-2005.

#### ***Fishery Dependent Monitoring***

The value of commercial landings in Louisiana exceeded \$276 million (Figure 9) in 2004, the eleventh highest since 1990. The department continues to collect commercial statistics through the Trip Ticket Program that was implemented in 1999. Through this program, commercial landings data are collected on a trip basis from wholesale/retail seafood dealers, crab shedders and commercial fishermen holding fresh products licenses. There were over 296,000 commercial fishing trips reported in 2004 producing nearly 1.1 billion pounds of seafood (Figure 10). Starting in May 2000 an electronic trip ticket program was developed and made available to dealers. Roughly 90 dealers to date have taken advantage of the computerized program and submit their trip ticket data to the department via the internet. Trip ticket information has been used to enhance the accuracy of stock assessments conducted by state and federal fishery management agencies.

**Marine Commercial Landings  
Dockside Value Louisiana 1990-2004**

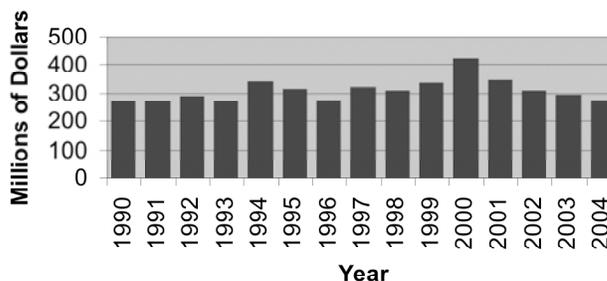


FIGURE 9. Source: National Marine Fisheries Service 2005.

FIGURE 10. 2004 Marine Commercial Landings.

| Species         | Landings(lbs) | Value(\$)   |
|-----------------|---------------|-------------|
| Crab            | 44,404,055    | 30,049,058  |
| Freshwater Fish | 12,111,406    | 4,187,198   |
| Menhaden        | 862,946,535   | 35,248,723  |
| Oyster          | 13,902,703    | 34,895,489  |
| Saltwater Fish  | 20,339,520    | 26,957,991  |
| Shrimp          | 134,191,167   | 139,825,552 |

Along with the collection of commercial landings data, the department also conducts trip interviews of commercial fishermen. Biologists interview commercial fishermen to gather detailed information about a specific fishing trip. The federally funded program focuses on species of greatest state and federal interest.

The department, in conjunction with other states along the Gulf of Mexico and the National Marine Fisheries Service, began a new program in 2002 for the collection of biostatistical information.

Biostatistical samples such as otoliths, used to determine a fish's age, are collected from both the commercial and recreational fishery. Otoliths are sectioned and read by department personnel to determine a fish's age much like reading the rings of a tree. Over 8,000 otoliths were collected during 2004-2005 in Louisiana. The program will continue to improve the information used in stock assessments and improve the accuracy of the results.

Over 4.8 million marine recreational fishing trips were taken by approximately 1.1 million anglers in 2004 (Figure 11). Recreational trips have been on a general rise since 1990. About 15.9 million spotted seatrout and 5.4 million red drum were caught in Louisiana in 2004.

**Marine Recreational Fishing Trips  
Louisiana 1990-2004**

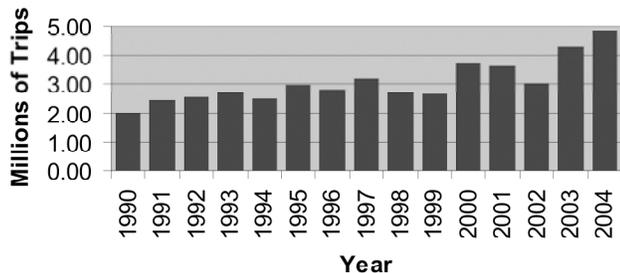


FIGURE 11. Source: National Marine Fisheries Service 2005.

Southwick Associates (2002), using data collected for the "2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation" (U.S. Department of the Interior, 2002), estimated that Louisiana saltwater anglers (resident and non-resident) spent approximately \$410 million in 2001 for fishing trip, equipment and other expenses, with a total economic impact in Louisiana's economy of approximately \$746 million. The association also estimated that this supported approximately 7,800 jobs in the state.

**Lyle S. St. Amant Marine Biological Research Laboratory**

The Marine Laboratory's primary mission is to conduct the research required to manage Louisiana's marine fisheries. The laboratory is made available for the use of other department and non-department entities engaged in fisheries management, enforcement, coastal restoration and marine education, and is also the headquarters of Coastal Study Area III in the Barataria Bay estuarine system. The Enforcement Division routinely used the laboratory as a base of operations, and part of the marine training of Enforcement cadets is conducted at the laboratory each spring. Several LSU, ULL and Nicholls State University researchers



PICTURE 3. St. Amant Marine Biological Research Lab.

make use of laboratory facilities. The department's Education Section conducts a teacher workshop (Wetshop) at the laboratory each summer. The marine laboratory also supports the monitoring of the Grand Isle Sulphur Mine Reef for the Louisiana Artificial Reef Program.

**Federal Aid in Sport Fish Restoration**

The Federal Aid in Sport Fish Restoration Act, commonly referred to as the Dingell Johnson Act, was passed on Aug. 9, 1950, and was modeled after the Pittman Robertson Act to create a parallel program for management, conservation and restoration of fishery resources. The Sport Fish Restoration program is funded by revenues collected from the manufacturers of fishing rods, reels, creels, lures, flies and artificial baits, who pay an excise tax on these items to the U.S. Treasury. An amendment to the Act in 1984 (Wallop Breaux Amendment) added new provisions by extending the excise tax to previously untaxed items of sport fishing equipment.

Appropriate state agencies are the only entities eligible to receive grant funds. Each state's share is based 60 percent on its licensed anglers (fishermen) and 40 percent on its land and water area. No state may receive more than 5 percent or less than 1 percent of each year's total apportionment. The program is a cost reimbursement program, where the state covers the full amount of an approved project then applies for reimbursement through federal aid for up to 75 percent of the project expenses. The state must provide at least 25 percent of the project costs from a non federal source. During 2005, Louisiana used the marine share of its Sport Fish Restoration Funds in support of the following projects.

**Marine Boating Access**

This project continued development of marine boating access for recreational anglers. It is an objective of the department to strengthen its ability to meet effectively the consumptive and non consumptive needs of the public for marine fish resources.

**Stock Assessment of Louisiana's Important Marine Finfishes**

High quality data for the stock assessment for various species are essential for making management decisions. This project will determine the spawning ratio of the major recreational saltwater finfish in order to comply with legislative mandates that regulatory action be taken when the Spawning Potential Ratio (SPR) falls below 30 percent. The goal is to ensure that the stocks of these finfish are not overfished. The spawning potential ratio will be determined using age, growth and fecundity. The Louisiana State University Coastal Fisheries Institute (LSUCFI) will assist with the analysis of samples. Marine Fisheries sampling crews obtain otoliths from important marine fish. Additional work is added as needed to address age and growth and reproductive biology of selected finfishes to support stock assessment efforts.

**Louisiana Marine Sport Fish Investigation, Laboratory Acquisition/Development, Southeast Louisiana**

This grant will be used to construct a new marine fisheries laboratory facility on a 7.8 acre tract in Grand Isle, La. This new laboratory facility will replace the Lyle S. St. Amant Marine Biological Laboratory located on Grand Terre Island.

***Evaluating Sport Fish Use of Created Wetlands in the Atchafalaya Delta Project (Contracted to LSUCFI)***

The Coastal Wetlands Planning, Protection and Restoration Act provided funding to restore wetlands in the Atchafalaya Delta. Dredge spoil from the river will be used to create new wetland habitat. This project will examine the suitability of this habitat for sport fish production. These data will be used in future planning efforts to optimize the creation of habitat for sport fish.

***Continuation of Identifying Essential Fish Habitats in Barataria Bay Project (Joint project with LSUCFI)***

This project will describe essential fish habitat (EFH) using sidescan sonar, split beam hydroacoustics and stable isotope techniques to identify essential fish habitat in Barataria Bay and quantify their value to important sport fish species. These techniques will yield data that can be used to address the protection and conservation of habitats important to marine, estuarine and anadromous finfish. This is a partnership project between Louisiana Department of Wildlife and Fisheries and Louisiana State University to develop a monitoring program, establish sampling protocols and conduct field sampling. The project will identify habitat use by juveniles by sampling tissue and examining differences in isotopic composition. These data will be integrated together to provide marine fisheries managers with habitat use by various fish species.

***An Analysis of Spotted Seatrout (*Cynoscion nebulosus*) Feeding Habits within Louisiana Bay Systems (Joint project with the University of New Orleans)***

This project will determine whether food web assemblages and trophic positions of sea trout differ among three distinct habitats using carbon and nitrogen stable isotope analysis and fatty acid analysis.

***Marine Sport Fish Tagging Study (Joint project with LSUCFI)***

This three year project will develop an alternative estimate of red drum escapement through a tagging study utilizing a diverse partnership among fisheries scientists and volunteer anglers. Angler education is an important component of this project. LSU is a funding and research cooperator.

***Sport Fish Utilization of Artificial Reefs vs. Open Water Habitats (Joint project with LSUCFI)***

The purpose of this research is to gain understanding of differential habitat utilization and energetics of natural vs. manmade oyster reefs for selected fish species. The project will evaluate and document the value of limestone based inshore artificial oyster reefs as essential fish habitat for important marine sport fish species, associated forage species and benthic invertebrate colonizing species.

***Fisheries and Habitat Assessment of Bayou St. John, Restoring a Historic Urban Sport Fishery (Joint project with UNO and New Orleans City Park)***

Bayou St. John and the City Park Lagoons are located near the downtown area of New Orleans, La. This grant will assess and restore habitat, determine the quantity and quality of sport fish populations and quantify fishing pressure. Modifications in the water supply system will allow estuarine organism inflow into the entire system. Public use should increase as a result of improved fishing.

**The Louisiana Artificial Reef Program**

The Louisiana Artificial Reef Program (LARP) was founded in 1986 through the cooperative efforts of the LSUCFI and the LDWF. Resultant legislation called for the development of a State Artificial Reef Plan and provided for an Artificial Reef Program in Louisiana. Act 100 of the 1986 Legislature established that LDWF would operate the program with logistical support from LSUCFI. LSUCFI and LDWF produced a plan in the fall of 1986 that was accepted by the Louisiana Legislature. The plan outlined the citing, permitting and monitoring requirements of the program.

LARP was established to use obsolete oil and gas platforms to provide habitat for Louisiana's coastal fishes. Federal law and international treaty require oil exploration companies to remove these platforms one year after production ceases. LARP has provided an opportunity for oil companies to contribute to maintenance of fisheries habitat. Since its inception, a total of 39 petroleum and other companies have participated in the offshore program and donated the jackets of 142 oil and gas platforms, 40 Armored Personnel Carriers (APC's) and one offshore tug structure which were installed at select locations as artificial reefs. In addition the reef program also developed 14 inshore reefs, primarily low profile reefs composed of shell and limestone. LDWF constructed eight reefs, and six others were associated with public conservation groups. In working with one of these groups the department constructed four reefs using reef balls. These reefs have been deployed successfully in tropical and oceanic environments but this was the first attempt to deploy in an estuarine setting. Five new obsolete oil platforms were added to the program as artificial reefs during the 2004-2005 calendar years.

In June 2004, the department deployed its first platform as part of its deep-water reef program. The structure, located in South Pass Block 89, approximately 15 miles south of the mouth of the Mississippi River, was previously owned by Marathon. The reefs are in water depths in excess of 400 ft. This water depth was chosen to minimize the impacts on the shrimp fishery. It has been reported that less than 1 percent of the shrimping activity takes place at these water depths. In addition these platforms are very difficult and expensive to remove. The partial removal preserves the hard bottom habitat and maintains fishing opportunities, the oil and gas industry saves money on decommissioning the platforms, but more importantly the fish keep their homes. Since that time two additional platforms have been deployed as deepwater reefs.



PICTURE 4. Platform towed to permitted artificial reef site.

## HABITAT PROTECTION PROGRAMS

Habitat Protection Programs include the Southeast Area Monitoring and Assessment Program (SEAMAP), Hydrographic Monitoring, Monitoring Louisiana's Rainfall, Air Temperature, and River Discharge, Oil Spills and Hazardous Materials, Caernarvon Freshwater Diversion Monitoring, Seismic and Coastal Wetlands Protection.

### Southeast Area Monitoring and Assessment Program

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a cooperative state, federal and university program for the collecting, managing and disseminating fishery-independent biological and environmental data and information in the southeastern United States. Fishery-independent data are those collected by fisheries scientists, rather than fishermen. SEAMAP collects data on fish stocks that are managed jointly by the states and federal government, and conducts a variety of data collection activities including a Fall Shrimp/Groundfish Survey, Spring Plankton Survey, Reef Fish Survey, Summer Shrimp/Groundfish Survey, Fall Plankton Survey and other plankton and environmental surveys.

The department collects samples between Southwest Pass of the Mississippi River and Pointe au Fer, and out to the 120-foot depth contour off the Louisiana coast. Louisiana SEAMAP activities include summer (July), autumn (October) and winter (December) trawl surveys that also collect zooplankton and environmental resource data.

Biological samples are collected using a SEAMAP-standard 40 foot trawl to collect juvenile and adult animals. Each trawl station is sampled once during daylight hours and once at night to measure the different animal communities that are present in a daily cycle. Plankton nets are used to sample early life history stages (eggs and larvae) of marine organisms. Environmental data are collected at all stations.

Data from all sample cruises, including real-time shrimp and red snapper data from the summer and fall cruises, respectively, were entered, verified and uploaded to the SEAMAP data management system. SEAMAP data are available by request, as are the various publications of the SEAMAP program including environmental and biological atlases of the Gulf of Mexico for each year from 1983 through the present. More information about SEAMAP is available at the Gulf States Marine Fisheries Commission website: <http://www.gsmfc.Original/>.

### Hydrographic Monitoring

The department began collecting constant records of salinity, water temperature and tide level in 1958. This program continued in 2004-2005, cooperatively between LDWF and the U.S. Geological Survey (USGS). Data are collected from 15 stations located from the Pearl River to Calcasieu Pass; details are shown below (Figure 12).

Field data are collected by USGS, and finished data are provided to the department. All sites collect data in near real-time (4 hour lag), and the data are transmitted via satellite from the instrument in the field to the USGS office in Baton Rouge and downloaded to the department's database via the Internet. Both internal and

external data requests are filled from this database. Once processed, the data are used to support fishery management by, for example, determining how much suitable area of brown shrimp nursery grounds are available each year and setting season opening dates. Data from these monitoring stations can be viewed by visiting the department's website:

<http://www.wlf.state.la.us/apps/netgear/index.asp?cn=lawlf&pid=884>.

FIGURE 12. Data collection stations

| LDWF# | USGS#         | STATION NAME                                      |
|-------|---------------|---|
| 105   | 0738023365    | Bayou Rigolets near Slidell                       |
| 112   | 07374526      | Black Bay near Snake Island, Point-a-la-Hache, LA |
| 117   | 3007220891501 | Mississippi Sound at Grand Pass                   |
| 315   | 073802515     | Barataria Pass East of Grand Isle                 |
| 317   | 07380251      | Barataria Bay North of Grand Isle                 |
| 320   | 07380335      | Little Lake near Cutoff                           |
| 321   | 07380340      | Tennessee Canal near Cutoff                       |
| 338   | 073802512     | Hackberry Bay NW of Grand Isle                    |
| 417   | 073813498     | Caillou Bay SW of Cocodrie                        |
| 518   | 07381349      | Caillou (Sister) Lake SW of Dulac                 |
| 622   | 07387040      | Vermilion Bay near Cypremont Pt.                  |
| 623   | 07387050      | Vermilion Bay at Bayou Fearman                    |
| 730   | 08017095      | North Calcasieu Lake near Hackberry               |
| 731   | 08017118      | Calcasieu River near Cameron                      |
| 732   | 08017044      | Calcasieu River at the I-10 Bridge                |

### Monitoring Louisiana's Rainfall, Air Temperature, and River Discharge

The department is continuously updating the database with rainfall, air temperature and river discharge readings throughout the state. These readings are used to monitor inputs that affect the elevation of the state's coastal waters. It is also vital in supporting fishery management by, for example, determining conditions available for brown shrimp each year, resulting in the season opening dates. Field data are collected by outside agencies and are provided to the department via the Internet. Once processed, both internal and external data requests are filled from the database by LDWF biologists.

The rainfall and air temperature data are collected from nine different divisions, each having multiple stations in various locations statewide. Each of these sites is supervised by National Oceanic & Atmospheric Administration (NOAA)/National Weather Service and the information is compiled and published in monthly and annual reports and received at the National Climatic Data Center (NCDC). Readings are available in monthly averages for each division, as well as average minimum and maximum air temperature. Monthly preliminary data are sent to the department but are not entered until NOAA edits and publishes the final draft for each month and then ultimately for each year. LDWF biologists enter the data from monthly published reports and verify annual summaries.

The river discharge data are collected in real-time and are transmitted to the U.S. Army Corps of Engineers, New Orleans District. The department retrieves this information at: <http://www.mvn.usace.army.mil/eng/edhd/wcontrol/wcmain.htm>. The Mississippi and Atchafalaya are the only two river basins that the department monitors. The Mississippi River station is located at Tarbert Landing, Miss. and the Atchafalaya River station is located at Simmesport, La. These stations transmit a daily reading. LDWF biologists enter and verify the data for inclusion into the database.

### National Coastal Assessment (Coastal 2000)

The department participated in an EPA program of National Coastal Assessment (formerly known as the Coastal 2000 program). This fiscal year covered the third sampling season of the five-year assessment. Departmental personnel sampled 50 randomly generated sites in coastal Louisiana for water quality, fish tissue and sediment samples. The sampling period was from Jul. 15 to Sep. 15, 2004 and the samples were divided spatially into Coastal Study Areas, with department staff conducting the sampling.



PICTURE 5. Taking a secchi disc reading.

Chlorophyll, total suspended solids, and sediment grain size were analyzed in the department coastal ecology laboratory. Water column nutrients, sediment metals, hydrocarbon, toxicity, total organic carbon and fish tissue hydrocarbon were sent to the EPA to be analyzed in contracted labs. Because of Hurricane Ivan's destruction of EPA's Gulf Breeze, Fla. Lab in September 2004, transfer of samples was significantly delayed after the 2004 sampling season. Data from these analyses will be used in a comparative assessment of the health of the Gulf of Mexico waters, based on the estuary inputs from all of the Gulf Coast states. The current report, "National Coastal Condition Report II," is now available at:

[http://www.epa.gov/owow/oceans/nccr2/Chapt5\\_Gulf.pdf](http://www.epa.gov/owow/oceans/nccr2/Chapt5_Gulf.pdf).

### Oil Spills and Hazardous Materials

The department's Oil Spill Task Force continued in 2004-2005 to develop and implement plans to protect and restore the state's wildlife, fishery and habitat resources from the adverse effects of oil spills. With other state and federal trustees, department representatives continued to develop a pilot plan for a regional restoration planning program for Louisiana that will provide a means to efficiently restore habitat and other natural resources injured as a result of small spills.

Pre-assessment data collection for Natural Resource Damage Assessment (NRDA) began for spills that occurred during 2004-2005.

- July 2004 Exxon/Mobil spill in West Bay Champaigne north of Grand Isle.

- August 2004 Unocal pipeline spill in Lapice Field in St. James Parish.
- September 2004 Stone Energy pipeline spill at Weeks Island South of Lafayette.
- September and October 2004 multiple post Hurricane Ivan oil spills into the marsh along Pass-a-Loutre and in the WMA itself.
- January 2005 Shell pipeline spill in Joseph's Bayou in South Pass.
- February 2005 Texas Petroleum pipeline spill at Delta Farms in Lafourche Parish.

The department continued damage assessment activities and monitoring spills.

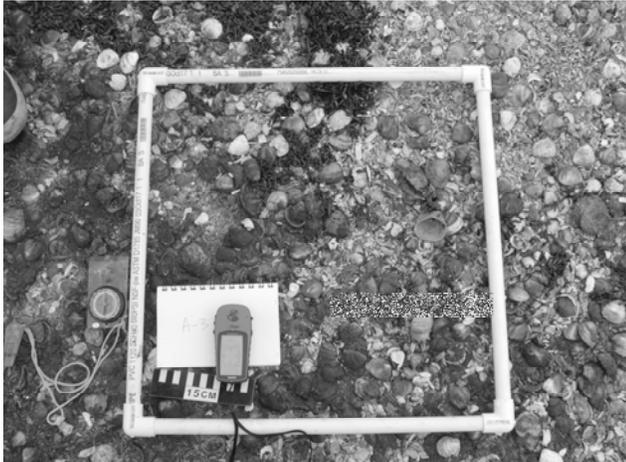
- Damage assessment on November 2003 Exxon/Mobil pipeline spill on Mendicant Island north of Grand Isle in Barataria Bay.
- Restoration planning with Shell/Texaco on a December/January 2003 pipeline blowout in Terrebonne Bay, south of Cocodrie, La. to discuss restoration projects.
- Injury determination on a March 2003, Exxon/Mobile oil spill in Lake Washington, out of Port Sulphur, La.
- Injury determination for the April 2002 BP/Amoco pipeline spill in Little Lake in the Barataria Basin near Galliano, La.
- Injury determination for the May 2002 Unocal Oil pipeline spill in the East Lake Palourde Field near Morgan City.
- Cooperative damage assessment for the September 2002 Ocean Energy well blowout at North Pass of the Mississippi River near Delta National Wildlife Refuge and Pass-a-Loutre State WMA is complete and restoration planning is in the works.
- Continual site visits for damage assessment determinations of the December 2002 Hilcorp pipeline spill at Duck Lake in the Atchafalaya basin.
- Continue restoration planning for an April 2001 Williams Petroleum pipeline spill at Mosquito Bay near Pointe au Fer.
- Monitoring of restoration that was put in place for the November 2000 T/V Westchester tanker spill in the Mississippi River. The focus of restoration for this spill was the area on and around Pass-a-Loutre State WMA where a delta splay project was constructed to compensate for marsh and other habitat injuries. Improvements were also made to campground facilities on the WMA. Monitoring continues.
- A marsh creation project near the site of a September 1998 Equinox well blowout in Lake Grand Ecaille, Plaquemines Parish has been selected for implementation pending insurance claims issues resulting from bankruptcy of the responsible party and completion of a consent decree.
- Restoration planning activities for a June 1997 Apache Corporation pipeline spill in coastal Vermilion Parish continued in 2004.
- LDWF staff continued to work with other state and federal trustees to determine the extent of natural resource injuries resulting from the spill and develop suitable restoration alternatives for a Sonat well blowout in August 1997.

The department also participated in an interagency project initiated by the Louisiana Oil Spill Coordinator's Office to develop regional plans to restore natural resources injured in oil spills.

These regional restoration plans and the regional Environmental Impact Statement associated with these plans went through a number of edits in 2004-2005.

In addition the department is participating with other state and federal agencies in planning restoration of hazardous materials sites. Two planning activities, Bayou Trepagnier in St. Charles Parish and Calcasieu River in Calcasieu Parish, continue.

The department also evaluated and responded as needed to approximately 3,000 oil spill notifications which were received from State Police. These notifications cover a range of hazardous emissions and chemical spills as well as oil spill related incidents.



**PICTURE 6.** Oil on shore of Mendicant Island during February 2004 site visit after Exxon/Mobil spill in Lake Washington.



**PICTURE 7.** NRDA Trustees during July 2004 site visit to Mendicant Island.

### Seismic Section

The LDWF Seismic Section was created in 1939 specifically to protect oysters, fish, shrimp and other wildlife from the effects of seismic exploration. Seismic exploration uses energy waves to generate a profile of sub-surface reflective layers that help define potential oil and gas traps. The energy waves can be produced by explosives detonated below the ground (generally 100 - 150 feet deep), by air guns that emit a powerful burst of air just above the surface, or by large vibrating pads placed on the surface. These projects can occur in sensitive wetlands, water bodies and uplands. Seismic agents monitor geophysical companies to protect

Louisiana's fish and wildlife resources by ensuring compliance with LDWF seismic rules and regulations. During fiscal year 2004-2005, the seismic section monitored 27 projects throughout the state.

### Coastal Wetlands

In 2004-2005, the Marine Fisheries Division continued to work with state and federal agencies to develop strategies for slowing the rate of coastal wetlands loss in Louisiana. Multi-agency planning ensures that the trust resources of many agencies are included in the plans. For example, flood protection and reducing salt-water intrusion into areas of fresh and intermediate marshes have been the focus of major civil works and restoration projects in 2004-2005. Many of these projects are designed to reduce flooding and salt water intrusion by blocking tidal exchange. Loss of tidal exchange reduces the area of wetland nurseries available to juvenile marine organisms, thus potentially reducing the population of those species. Changes to coastal fish and wildlife resource populations can cause displacement and economic stress for communities with economies that depend upon these resources. Marine Fisheries staff worked with federal and state planners to develop strategies that ensure that new or modified designs avoid, minimize or mitigate adverse environmental impacts from large coastal projects.

Extensive fisheries resource monitoring programs continued for both the Caernarvon and Davis Pond Freshwater Diversion Projects. The Caernarvon Project has been operational for 14 years and department personnel have monitored its effects on the fish, wildlife and vegetation populations in the basin throughout its operation. The Davis Pond Project came on-line in July 2002. Ongoing maintenance designed to address problems with flooding in the ponding area north of Lake Cataouatche limited the amount of freshwater diverted through the structure. Marine Fisheries personnel continued to monitor the fisheries resources in the Barataria Basin including a comprehensive study of the Davis Pond project effects on recreational fishing throughout the basin. The Marine Fisheries Division provides input into the operation of both structures.

# INLAND FISHERIES

The Inland Fisheries Division manages fish populations and habitats for the conservation and improvement of sport and commercial fishing primarily in the freshwater areas of the state. Fish populations are managed through surveys, fish sampling, fisheries regulations, fish stocking and the modification of fisheries habitat. In addition, the division is charged with the control of nuisance aquatic vegetation in public water bodies. This is accomplished through an aggressive aquatic plant control program that utilizes a variety of management options including herbicides, drawdowns and biological controls. The division is also coordinating the state's efforts with respect to invasive species. A recently passed executive order created a task force under Wildlife and Fisheries to create a state management plan to deal with nuisance invasive species.

## FISHERIES MANAGEMENT

### Lake Management

Fisheries managers estimate relative abundance, size class structure and species composition of fish population and physiochemical characteristics of the water in 90-100 lakes, rivers and streams annually. All lakes are sampled in a similar manner so that data from different waterbodies are comparable.

Electro fishing samples are taken in the spring and fall to provide a measure of abundance. Only largemouth bass are collected in the spring while largemouth bass and crappie are collected in the fall. A forage sample of all species is also collected in the fall. Standard sampling time is 900 seconds per station.

Gill net samples are taken during winter primarily to determine relative abundance and length frequencies of gizzard shad, striped bass, hybrid striped bass, commercial and rough fish species. Monofilament nets with meshes from 2.5 to 4.0 inches (bar mesh) are set at dusk and gathered at sunrise. Each fish taken is identified, weighed and measured. This sampling method provides gear selectivity, species composition, and length frequency information.

Nighttime shoreline seine sampling measures reproductive success of the sunfishes including bass and bluegill. Year-class strength, species composition and prey availability are provided by this sampling effort. Samples are conducted during spring and summer and consist of one quadrant haul at each sample site using a 25-foot by 6-foot seine.



Frame nets are used to measure relative abundance and length-frequencies of crappie and other sunfish. Species composition, age and growth and length weight relationships are determined. Sampling is conducted for a minimum of 48 hours with two nets at each station.

Water quality samples are taken at all sampling stations. Water temperature, pH, dissolved oxygen concentration, conductivity, oxidation/reduction potential and water body depth are measured.

Creel samples were conducted on six water bodies in 2005. This sampling method puts the fisheries manager in direct contact with the fishermen. Information collected includes species sought and species caught, distance traveled, time fished, number caught and released and a measurement of all fish harvested.

The Inland Fisheries Division also monitors other fish species, including paddlefish and sturgeon. The division continues to collect data on relative abundance, habitat requirements, movements and population estimates. Paddlefish were again artificially propagated and 114,000 were stocked in Louisiana waters. All paddlefish fingerlings stocked were implanted with coded wire tags before release. Tagging, age and growth and population characteristics of pallid and shovelnose sturgeon will continue to be collected in 2006. The division also successfully spawned and stocked 12,000 pallid sturgeon this year. Again each fish was individually tagged prior to release.

Technical advice to owners of ponds and small lakes is also part of the responsibility of the division. During the past year, division biologists made over several site visits assisting residents of the state on problems ranging from construction and stocking requirements, to harvest and disease identification. The biologists also answered numerous phone inquiries about various pond-related problems.

The division continues its Freshwater Artificial Reef Program. With many of our Louisiana impoundments losing natural complex habitat as a symptom of aging, the department is now in the process of developing guidelines for the construction of freshwater artificial reefs, with the use of various materials. The preliminary findings indicate that material and methods used do attract and provide necessary cover for all sizes of sport fish and have no negative environmental consequences.



A total of six lakes were designated as candidates for placement of artificial reefs: Toledo Bend; Claiborne; Caney; D'Arbonne; Rodemacher and Bruin.

Each reef was constructed, marked with buoys and placed in varying depths. Maps of reef locations with coordinates were made available to anglers.



The Louisiana Cooperative Fish Disease project which the division has with the L.S.U. Aquatic Animal Diagnostic Lab within the School of Veterinary Medicine, provides support to private pond owners. Last year 96 cases were submitted as part of this project.

The division is also a member of the Southeastern States Cooperative Fish Disease and Parasite Project conducted and centered at Auburn University. This project involves the clearance of chemicals for treatment usages research in fish disease identification, new diagnostic and treatment methods and vaccine development.

The division is also responsible for conducting investigations into fish kills in freshwater. Area impact and losses are recorded for each kill. Naturally-occurring dissolved oxygen depletion, as well as saltwater intrusion, was indicated as the cause of most kills. Continued investigations into the Largemouth Bass Virus problem were conducted. LDWF personnel assisted in administering a grant to LSU to develop non-lethal methods for detection of this disease.

#### **Aquatic Plant Research and Control Program**

During fiscal year 2004-2005, the Aquatic Plant Research and Control Program (APRCP) provided substantial benefits to the citizens of Louisiana. Responsibilities included monitoring water bodies for non-native and invasive aquatic vegetation, providing technical assistance and continuous investigation into more effective and environmentally safe methods of controlling these nuisance plants. Aggressive treatment of affected waters continued in an effort to restore and improve the aquatic habitat and the natural desirable balance of plants and fish. Control of nuisance plant species is also necessary to provide boating access to many public waterways.

Twenty-two lakes were type-mapped to determine and evaluate the status of aquatic weeds, primarily submersed. Species composition and density were determined on eight lakes. The results from these investigations were used in formulating management plans.

Biologists continued to provide advice and technical assistance to private and municipal pond owners concerning aquatic vegetation management problems. This popular extension program also provided aquatic plant identification assistance for the public on request.

Research projects of the APRCP included evaluation of new herbicides to determine their effectiveness for use in aquatic weed control.

The department utilizes both conservation and federal funds to control, primarily, water hyacinth (*Eichhornia crassipes*). However, in the course of treating water hyacinth with the herbicides 2,4-D and glyphosate, emergent plants such as alligatorweed (*Alternanthera philoxeroides*), primrose (*Ludwigia* spp.), American lotus (*Nelumbo lutea*) and several others of minor importance were also sprayed. Other troublesome submersed and floating plants not susceptible to control with 2,4-D and glyphosate, such as hydrilla (*Hydrilla verticillata*) and two species of salvinia (*Salvinia minima* and *S. molesta*), require more expensive herbicides. State funds in the Aquatic Plant Control Fund (APCF) were used to purchase herbicides to address infestations of these plants. Crews utilizing outboard powered boats, airboats, mudboats and roadside spray units effectively applied herbicide to 53,013 acres of infested waters.

In addition, 15 percent of the APCF is also used to fund research into aquatic plant control by the Louisiana State University Agriculture Center. LSU continued its research into biological control of salvinia using the salvinia weevil (*Cyrtobagous salvinae*). Research efforts are currently focused on rearing sufficient numbers of the weevil to release on infestations of salvinia. Test releases have been made on common salvinia in selected areas of southeast Louisiana and on a persistent infestation of giant salvinia in the Houma area.

Biological control of giant salvinia using the salvinia weevil is recognized as the leading, and most often used, giant salvinia-control strategy in all areas of the world due to its highly effective nature. Over one million salvinia weevils have been mass produced by the U. S. Department of Agriculture (USDA) in the last two years and released into giant salvinia-infested waterways in Texas and Louisiana.

The project began with the technology transfer phase. In a collaborative effort, the USDA and LA Department of Wildlife and Fisheries began four releases of about 300,000 salvinia weevils into three field insectary sites (FIS) near Houma, La. during April 2003. Bi-monthly monitoring of the sites indicated that the weevils established and quickly dispersed at all release sites. Populations are doing well at all three sites.

Weevil and plant populations will continue to be monitored in order to document the efficacy and distribution of the weevil in Houma, La.



**Fish Stocking**

The goals and objectives of the Inland Fisheries Division include providing the public with a quality fishing experience and managing for big bass. In part, the management for big bass is reliant upon the stocking or incorporating of the Florida largemouth bass gene into our native black bass environment. In 2004-2005, departmental Inland Fish Hatcheries provided fingerlings as an integral part of our fisheries management program for 86 diversified water bodies encompassing over one million acres throughout the state of Louisiana.

**Summary of Fish Stocked Fiscal Year 2004-2005**

|                          |                  |
|--------------------------|------------------|
| Blue Catfish:            | 6,744            |
| Sturgeon:                | 11,586           |
| Triploid Grass Carp:     | 15,082           |
| Florida Largemouth Bass: | 3,531,562        |
| Striped Bass:            | 98,113           |
| Hybrid Striped Bass:     | 65,462           |
| Channel Catfish:         | 266,761          |
| Bluegill:                | 1,172,309        |
| Paddlefish:              | 16,987           |
| <b>Total</b>             | <b>5,184,606</b> |

The following is an alphabetical listing of the water bodies stocked in fiscal year 2004-2005:

Amite River, Anacoco Lake, Atchafalaya Basin and River, Bayou Lacombe, Bayou Pierre WMA, Bayou Signette, Beaver Park, Black Bayou (Bossier), Black Bayou Lake (Caddo), Blind River, Bonnie Carre Splw., Brec Pond, Buhlow Lake, Bundick Lake, Caddo Lake, Caernarvon, Camp Minden, Caney Creek Reservoir, Cataouatche Lake, Chatham Lake, Cheniere Brake, Chicot Lake, City Park Lake (Baton Rouge), City Park Lake (New Orleans), Claiborne Lake, Concordia Lake, Concordia Parish Community Center, Corney Lake, Cross Lake, Cypress Lake, D'Arbonne Lake, Dept Of Ag Ponds, False River, Girard Park, Grambling Lake, Grassy Lake, Hardwater Lake, Henderson Lake, Iatt Lake, John K. Kelly, Kepler Lake, Kenner Ponds, Lacassine Nat'l Wildlife Refuge, Lac Des Allemands, Lafreineire Park, Lake Bruin, Lake Fausse Point, Lake Martin, Lake Providence, Lake St. John, Lake Verret, Lower Sunk Lake (Dist.4), Mermentau River, Mill Creek Lake, Mississippi River, Old River Control, Pat's Lake, Paillet Canal, Poverty Point Lake, Red River - Pools 1, 2, 3, 4, & 5, Red River (WMA)-Barrow Pit, Rockefeller Refuge,

Rodemacher Lake (Cleco), Saline Lake, Second Lake, Sherburn WMA, Sibley Lake, Spanish Lake, St. James Par. RR Pond, St. John Bayou, Tangipahoa River, Tchefuncte River, Thistlewaite WMA, Tickfaw River, Toledo Bend, Torres Park, Two O'Clock Bayou, University Lake, Vernon Lake and Waddill Rec. Area Lake.

**PUBLIC BOATING AND FISHING ACCESS**

In a cooperative effort, the department assists local government entities requesting financial assistance in the development and construction of boating and fishing access facilities. To accomplish this, the department obligates a portion of its federal Sport Fish Restoration funds to match up to 75 percent of the total cost of these projects. This program funds both fresh and saltwater projects which may include construction of boat ramps, parking areas, docks, bulk heading and fishing piers. A total of 69 projects are completed to date, and another 19 are in various stages of either planning or construction.

**Public Access Facilities for Boating and Fishing Under Construction or in the Planning Stage**

- Cheniere Lake Boat Lane Marking
- Plaquemines Waterfront Floating Fishing Docks
- Reserve Boat Launch, Phase II
- Reserve Boat Launch, Phase III
- Fort Pike Boat Launch
- Belle Chase Boat Launch
- Golden Meadow Public Boat Launch
- Sherburn WMA Boat Launch
- Burns Point Park Boat Launch
- Ashland Boat Launch
- Calcasieu/Industrial Canal Fishing Pier
- Lake End Park, Phase II
- Jessie Fontenot Boat Launch, Phase III
- South Houma Fire Station Boat Launch
- Texas Gulf Road Boat Launch

**Projects Completed During Fiscal Year 2004-2005**

- Intracoastal City
- D'Arbonne Lake
- Lockport Boat Launch
- Vidalia Landing
- Airport Boat Landing
- North Pass Boat Landing
- Michol Landing



**PERMITS**

Inland Fish Division issues a variety of permits to provide individuals a legal method to participate in a specific activity. A list of these permits, a short explanation for each, and the number issued last year appear below.

**Freshwater Scientific Collecting Permit**

Used to take fish for scientific or educational purposes, propagation or for distribution. Issued - 80

**Triploid Grass Carp Permit**

Used to allow individuals to possess triploid grass carp. Issued - 252

**Triploid Grass Carp Sellers Permit**

Used to allow individuals to import, transport, possess and sell triploid grass carp. Issued - 9

**Tilapia Permit**

Used to allow individuals to possess tilapia. Issued - 12

**Experimental Freshwater Minnow Dipnet**

Used to allow individuals to commercially fish for minnows using a specific dip net. Issued - 0

**Gamefish Fingerling Permit**

Used to allow individuals to transport, possess and sell game fish fingerlings. Issued - 19

**Mussel Harvester's Permit**

Used to allow individuals to commercially harvest freshwater mussels. Issued - 0

**Mussel Buyers Permit**

Used to allow individuals to buy commercially harvested mussels from mussel harvesters. Issued - 0

**Scuba Spearfishing Permit**

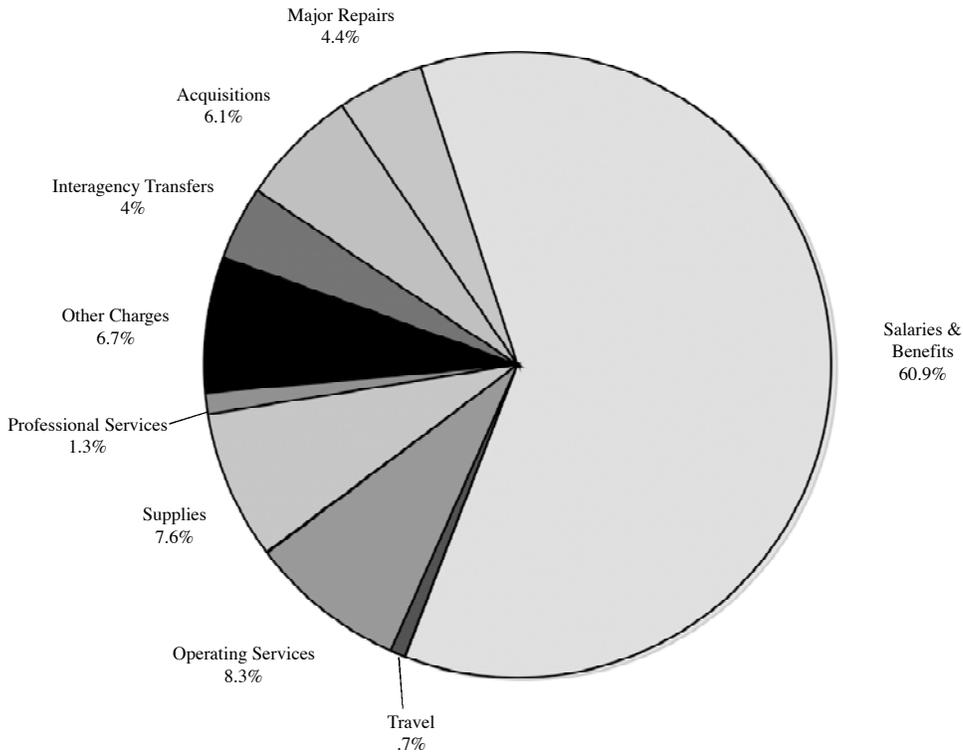
Used to allow individuals to spearfish in Toledo Bend Reservoir June through September. Issued - 1

APPENDIX

**Fiscal Year 2004-2005 LDWF Expenditures by Category (type)**

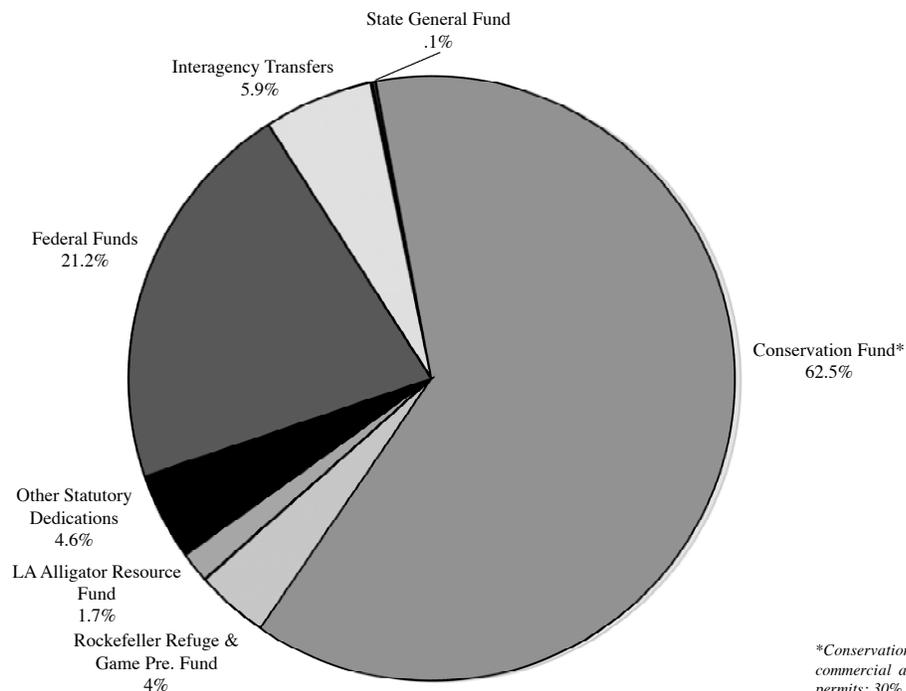
*Total Expenditures = \$70,098,045*

*Total Authorized Positions = 794*



**How 2004-2005 Expenditures Were Funded (Means of Financing)**

*Total Means of Financing = \$70,098,045*

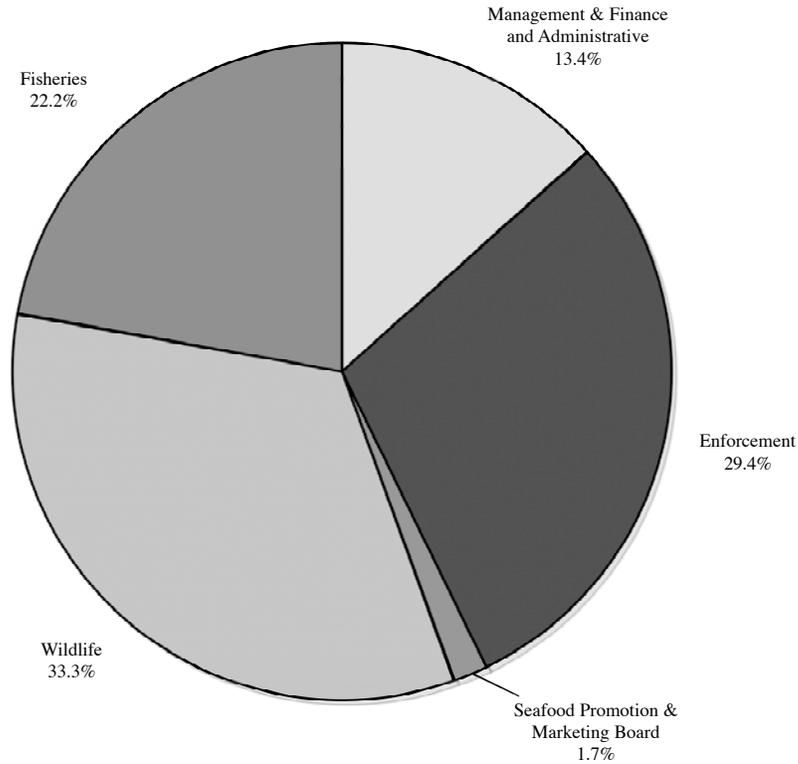


*\*Conservation Fund is comprised of about 60% commercial and recreational licenses and other permits; 30% oil/gas royalty type revenue.*

APPENDIX

**Fiscal Year 2004-2005 Department Expenditures by Appropriated Program**

*Total Expenditures = \$70,098,045*



**Sources of Revenue to the Conservation Fund Fiscal Year 2004-2005**

*Total Revenue = \$38,499,775*

